HCD-S300

SERVICE MANUAL

Ver 1.7 2004.05

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model

HCD-S300 is the amplifier, DVD/CD and tuner section in DAV-S300.

Model Name Using Similar Mechanism	NEW
Mechanism Type	CDM-55D-DVBU2
Base Unit Type	DVBU2
Optical Pick-up Type	KHM220AAA

SPECIFICATIONS

Amplifier section

Stereo mode 30 W + 30 W (3 ohms at 1 kHz, THD 10 %)

Surround mode Front: 30 W + 30 W
Center*: 30 W
Rear*: 30 W + 30 W (3 ohms at 1 kHz, THD 10 %)
Subwoofer*: 30 W (3 ohms at 100 Hz, THD 10 %)

* *Depending on the sound field settings and the source, there may be no sound output.*

Inputs VIDEO 1, 2:
Sensitivity: 150 mV
Impedance: 50 kilohms

Outputs VIDEO 1 (AUDIO OUT):
Voltage: 2 V
Impedance: 1 kilohms
WOOFER:
Voltage: 2 V
Impedance: 1 kilohms
PHONES:
Accepts low- and high-impedance headphones

CD/DVD system

Laser Semiconductor laser

Signal format system
PAL/(NTSC)

Frequency response (at 2 CH STEREO mode)
DVD (PCM): 2 Hz to 22 kHz (±1.0 dB)
CD: 2 Hz to 20 kHz (±1.0 dB)

Signal-to-noise ratio
More than 80 dB (VIDEO 1 (AUDIO) connectors only)

Harmonic distortion
Less than 0.03 %

FM tuner section

System PLL quartz-locked digital synthesizer system

Tuning range 87.50 – 108.00 MHz (50 kHz step)

Antenna FM wire antenna

Antenna terminals
75 ohms, unbalanced

Intermediate frequency
10.7 MHz

AM tuner section

System Tuner section:
PLL quartz-locked digital synthesizer system

Tuning range European models:
531 – 1602 kHz (9 kHz interval)
Australian models:
530 – 1710 kHz (10 kHz interval)
531 – 1602 kHz (9 kHz interval)

Antenna Loop antenna

Video section

Inputs Video: 1 Vp-p 75 ohms

Outputs Video: 1 Vp-p 75 ohms
S-video:
Y: 1 Vp-p 75 ohms
C: PAL 0.3 Vp-p 75 ohms
NTSC 0.286 Vp-p 75 ohms

General

Power requirements
European models:
230 V AC, 50/60 Hz
Australian models:
220 – 240 V AC, 50/60 Hz

Power consumption
68 W

Dimensions (approx.)
355 × 70 × 365 mm
(15 × 2 7/8 × 14 3/8 inches) (w/h/d)
incl. projecting parts

Mass (approx.) 3.8 kg (8 lb 6 oz)

Operating temperature
5°C to 35°C (41°F to 95°F)

Operating humidity
5 % to 90 %

Supplied accessories
Check that you have the following items:
- AM loop antenna (1)
- FM wire antenna (1)
- Speakers (5)
- Speaker cords (5 m x 4, 15 m x 2)
- Video cord (1)
- Remote commander (remote) RM-SS300 (1)
- R6 (size AA) batteries (2)
- Foot pads (24)
- Speakers - Connection and Installation (card) (1)
- 21-pin adaptor (1) (only for the European models)

Design and specifications are subject to change without notice.

COMPACT AV SYSTEM

9-929-072-19
2004E02-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth Ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

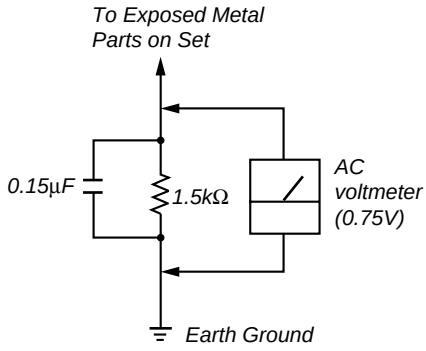

Fig. A. Using an AC voltmeter to check AC leakage.

与安全有关的零部件须知

在原理图上用阴影及 ⚠ 标记来识别的零部件在安全操作上是具有关键性的。这些零部件要用本手册中所示的部件号对应的索尼零部件进行更换。

在安全操作上具有关键性的电路调整与索尼公司出版的维修手册完全一致。在更换关键零部件时或怀疑动作失常时，请进行这些调整操作。

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

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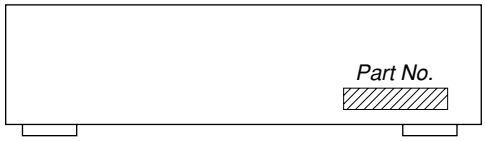
MODEL IDENTIFICATION

–Back panel–



Model	Part No.
US model	4-226-383-0☐
AEP, UK, CEN, CEU models	4-226-383-1☐
Hong Kong model	4-226-383-2☐
Australian model	4-226-383-3☐
E32 model	4-226-383-4☐
Mexican model	4-226-383-6☐
Russian model	4-226-383-7☐
Chinese model	4-226-383-8☐
Singapore model	4-226-383-9☐
E12 model	4-230-797-0☐
Saudi Arabia model	4-230-797-1☐
Canadian model	4-230-797-3☐
Taiwan model	4-230-797-4☐
AEP, UK models (made in China)	4-232-194-0☐
US model (made in China)	4-232-194-1☐
Korean model (made in China)	4-232-194-2☐

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

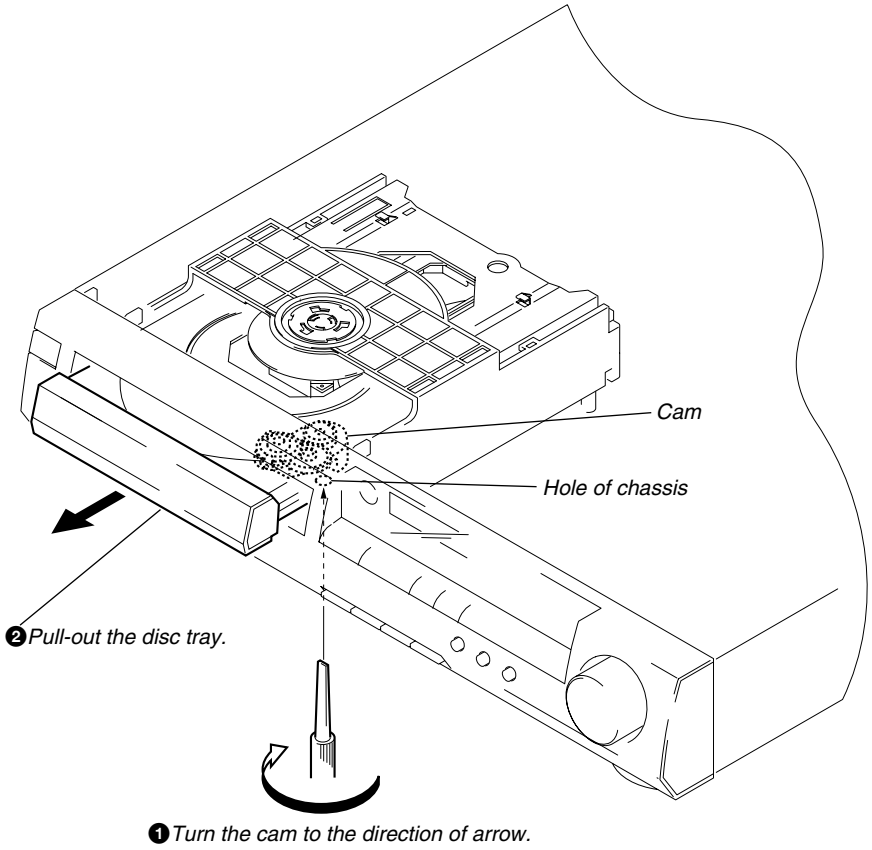
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output several times.

SECTION 1
SERVICING NOTE

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



When removing the disc tray, high torque is necessary to turn the ejection cam on the bottom surface. Therefore, the screw thread is easily damaged. To prevent this damage, turn it carefully.

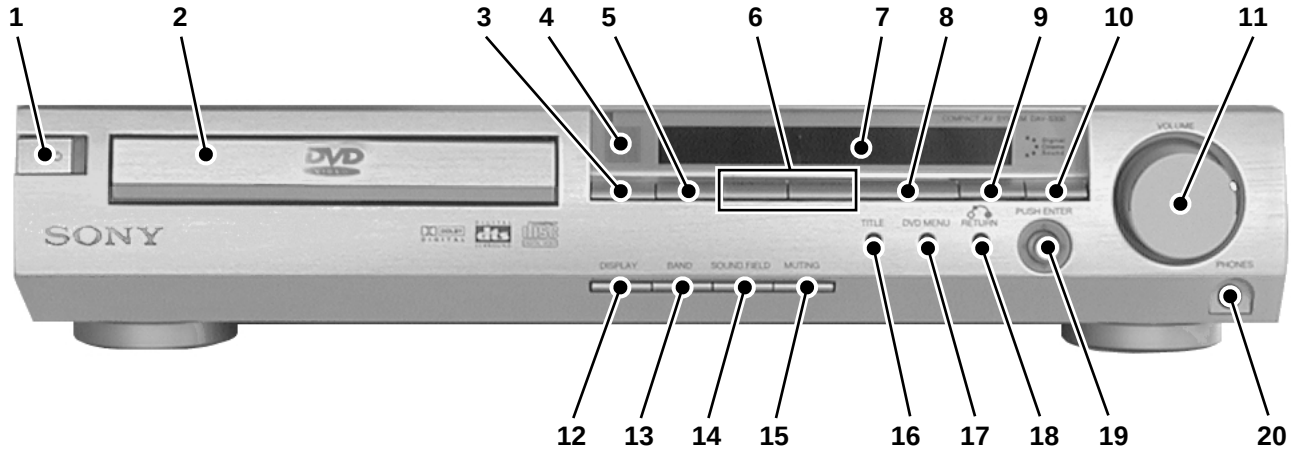
NOTES ON DVD BOARD EXCHANGE

If a DVD board is exchanged, “DRIVE AUTO ADJUSTMENT” may be unable to be performed. In this case, initialize a memory in the following procedure.

1. Starting Test Mode (see page 8).
2. Press the [2] button of remote commander to set the Drive Manual Operation (see page 14).
3. Press the [6] button of remote commander to set the Memory Check (see page 16).
4. Press the [CLEAR] button of remote commander to initialize a memory.

SECTION 2
GENERAL

Front Panel

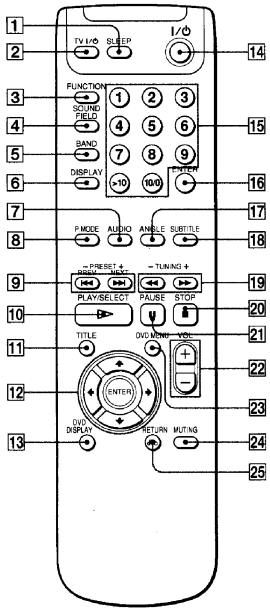


LOCATION OF PARTS AND CONTROLS

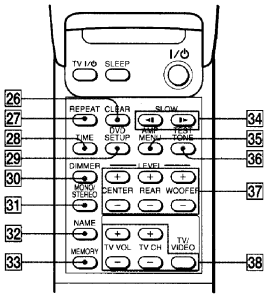
1 I/⏻ (POWER) button and indicator
2 DISC tray
3 remote sensor
4 ⏏ OPEN/CLOSE button
5 FUNCTION button
6 ⏮ / ⏭ PREV/NEXT/PRESET +/- button
7 Front Panel Display
8 ▷ PLAY button
9 ⏸ PAUSE button
10 ■ STOP button
11 VOLUME control
12 DISPLAY button
13 BAND button
14 SOUND FIELD button
15 MUTING button
16 TITLE button
17 DVD MENU button
18 ↩ RETURN button
19 ←/↓/↑/→ PUSH ENTER button
20 PHONES connector

Remote

This section is extracted from instruction manual.



1 SLEEP button
Activates the sleep timer.
2 TV I/⏻ (POWER) switch
Turns the TV on and off.
3 FUNCTION button
Selects the component you want to use.
4 SOUND FIELD button
Selects the sound field.
5 BAND button
Selects AM or FM band.
6 DISPLAY button
Switches the item displayed on the front panel display.
In the VIDEO 1/2 functions, it switches:
VIDEO 1 (or 2) → Sound field → VIDEO 1 (or 2)
7 AUDIO button
Changes the sound while playing a DVD or VIDEO CD.
8 P. MODE button
Selects program or shuffle play mode.
9 ⏮/⏭PREV/NEXT/PRESET +/– buttons
⏮ / ⏭PREV/NEXT : Press to go to the next chapter or track or to go back to the previous chapter or track.
PRESET +/– : Scan all preset stations.
10 ▷PLAY/SELECT button
Plays a disc.
11 TITLE button
Displays the title menu on the TV screen.
12 ←/↑/↓/→/ENTER button
Selects and executes the items or settings.
13 DVD DISPLAY button
Displays the Control Menu display on the TV screen to set or adjust the items.
14 I/⏻ (POWER) switch
Turns on and off the power of the system.
15 Number buttons
Select the items or settings.
16 ENTER button
Executes the items or settings.
17 ANGLE button
Changes the angles when playing a DVD.
18 SUBTITLE button
Displays the "SUBTITLE" menu in the Control Menu display.
19 ◀◀/▶▶ (SCAN)/TUNING +/– buttons
◀◀/▶▶ (SCAN) : Locate a point while monitoring the picture (19).
TUNING +/– : Scan all available radio stations.
20 ■STOP button
Stops playing a disc.
21 ⏸PAUSE button
Pauses playing a disc.
22 VOL (volume) +/– buttons
Adjust the volume.
23 DVD MENU button
Displays the DVD menu on the TV screen.
24 MUTING button
Mutes the sound.
25 ↩RETURN button
Press to return to the previously selected screen, etc.



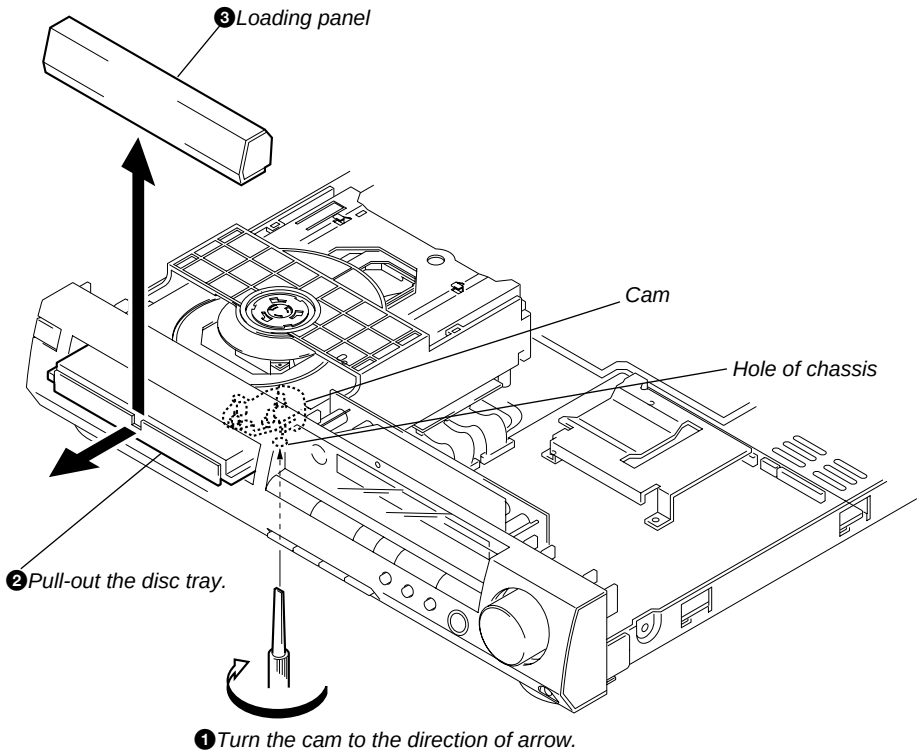
Inside the cover

26 CLEAR button
Press to return to the Continuous play, etc.
27 REPEAT button
Displays the "REPEAT" display on the TV screen.
28 TIME button
Displays the playing time of the disc, etc., on the front panel display.
29 DVD SETUP button
Displays the setup display on the TV screen to set or adjust the items.
30 DIMMER button
Turns the front panel display on or off.
31 MONO/STEREO button
Switches monaural or stereo of FM stereo reception.
32 NAME button
Activates the name function.
33 MEMORY button
Press to store a preset station.
34 ◀▮/▮▶ SLOW buttons
Play a disc in slow motion.
35 AMP MENU button
Displays the speaker set up parameters on the front panel display.
36 TEST TONE button
Turns test tone on and off.
37 SPEAKER LEVEL +/– buttons
Press to adjust the speaker level.
38 TV operation buttons
Control TVs.

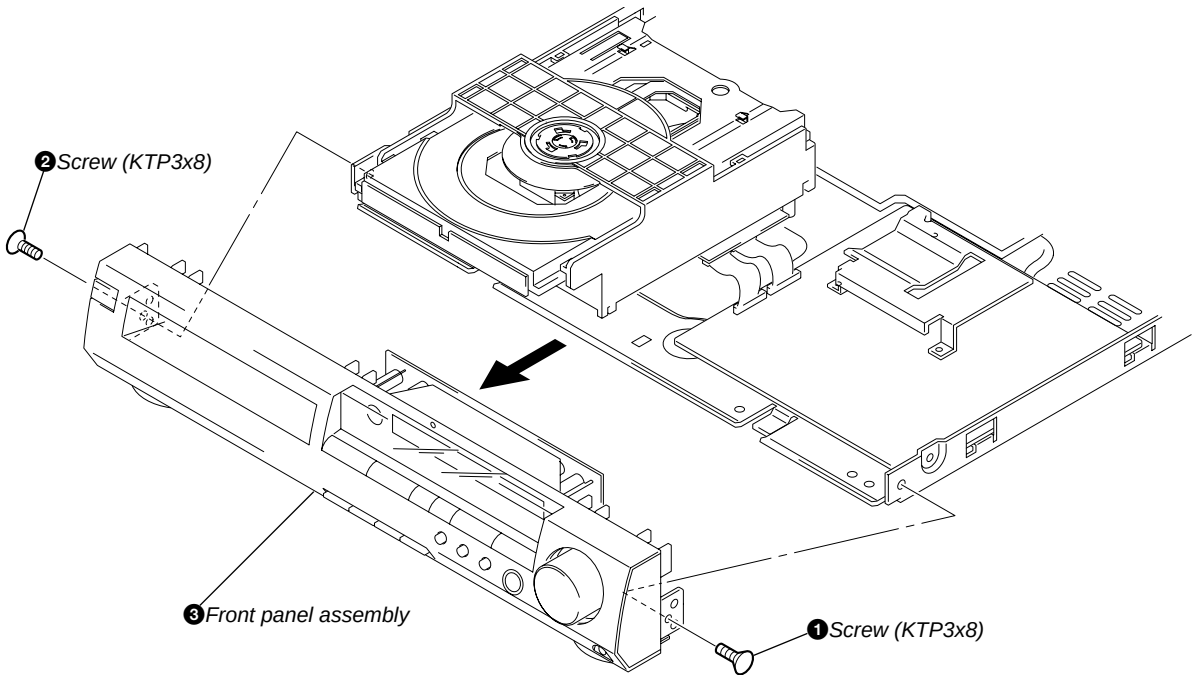
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

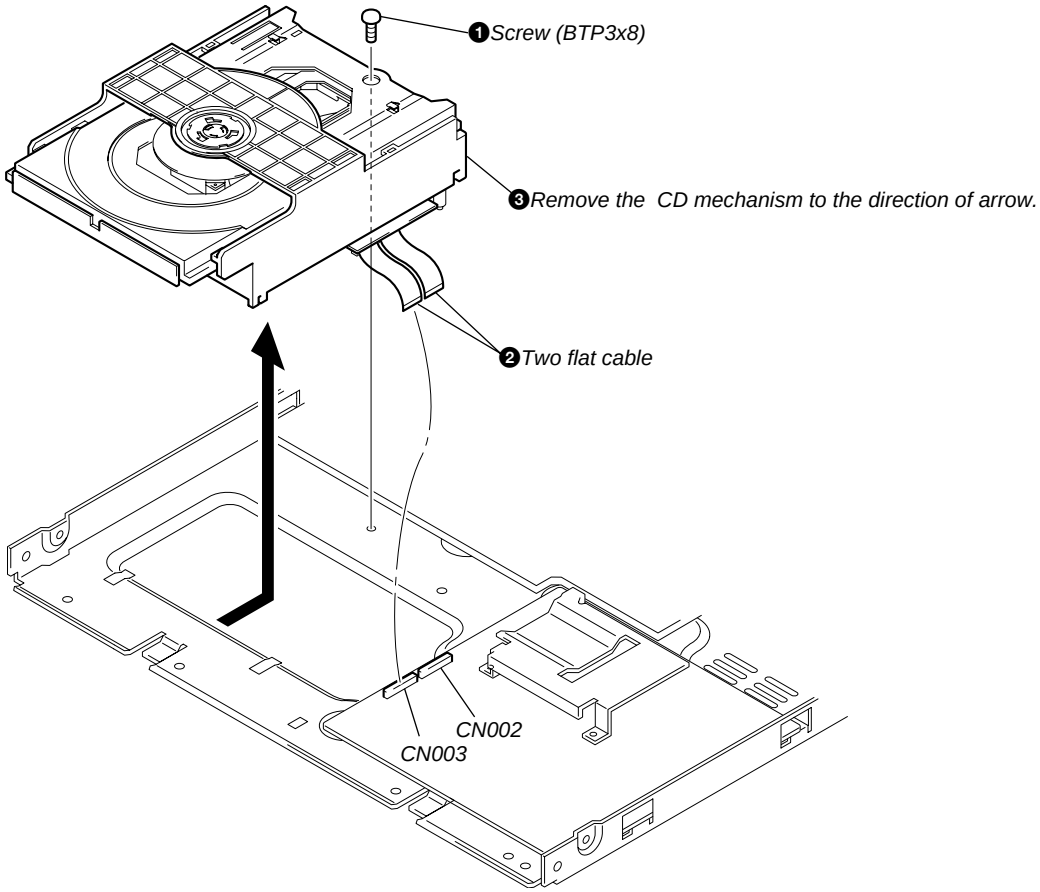
3-1. LOADING PANEL



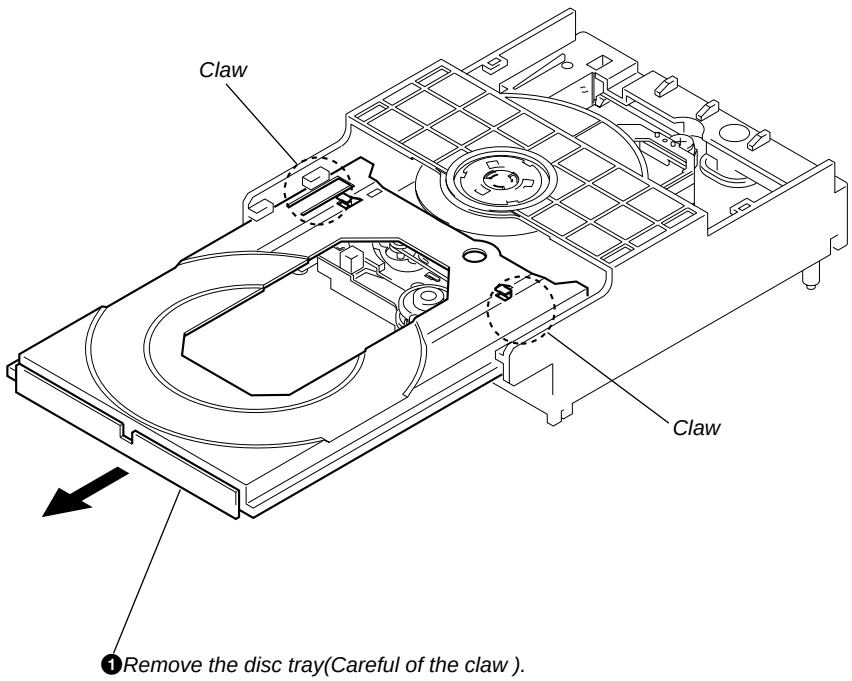
3-2. FRONT PANEL



3-3. CD MECHANISM



3-4. DISC TRAY



SECTION 4
TEST MODE

4-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

4-2. STARTING TEST MODE

Set the FUNCTION to DVD with the main unit power on. Next, while pushing the [STOP] button and the [MUTING] button on the main unit at the same time, turn the regulator to the right to start Test Mode and display the menu shown below on the TV screen. At the bottom of the menu screen, the model name and revision number are displayed.
To execute each function, select the desired menu and press its number on the remote commander. To exit from Test Mode, press the [POWER] button.

```
Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Version Information
6. Video Level Adjustment
Exit: Power Key
_
Model   : HCX932xxxx
Revision: 1.xxx
```

4-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander.
On the Test Mode Menu screen, press [0] key on the remote commander, and the following check menu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
0. Quit
1. All
2. Version
3. Peripheral
4. Servo
5. Supply
6. AV Decoder
7. Video
8. Audio
_
```

0. Quit

Quit the Syscon Diagnosis and return to the Test Mode Menu.

1. All

All items continuous check
This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```
    ### Syscon Diagnosis ###

Diag All Check
No. 2 Version

 2-3. ROM Check Sum
Check Sum = 2005



Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.
Following the message, press [NEXT] key to go to the next item, or [PREV] key to repeat the same check again. To quit the diagnosis and return to the Check Menu screen, press [STOP] or [ENTER] key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```
    ### Syscon Diagnosis ###




 3-3. EEPROM Check
Error 03: EEPROM Write/Reed N
Address    : 00000001
Write Data : 2492
Read Data  : 2490
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

Press [STOP] key to quit the diagnosis, or [PREV] key to repeat the same item where an error occurred, or [NEXT] key to continue the check from the item next to faulty item.

Selecting 2 and subsequent items calls the submenu screen of each item.
For example, if “5. Supply” is selected, the following submenu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
         No. 5 Supply
0. Quit
1. All
2. ARP Register Check
3. ARP to RAM Data Bus
4. ARP to RAM Address Bus
5. ARP RAM Check
_
```

0. Quit

Quit the submenu and return to the main menu.

1. All

All submenu items continuous check
This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry. Normally, all items are checked successively one after another automatically unless an error is found.

Selecting 2 and subsequent items executes respective menus and outputs the results.
For the contents of each submenu, see “Check Items List”.

General Description of Checking Method

2. Version

(2-2) Revision
ROM revision number is displayed.-
Error: Not detected.
The revision number defined in the source file of ROM (At the beginning of mass production, the Flash ROM of IC205 is used, but midway it is replaced by the IC206 OTP ROM. IC205 or IC206) is displayed with four digits.
Below IC205 are all IC205 or IC206.

(2-3) ROM Check Sum
Check sum is calculated.
Error: Not detected.
The 8-bit data are added at addresses 0x000F0000 ~ 0x002EFFFF of ROM (IC205) and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

(2-4) Model Type
Model code is displayed.
Error: Not detected.
The model code read from EEPROM (IC201) is displayed with 2-digit hexadecimal number.

	Model Type
DAV-S300 (US, CND)	20
DAV-S300 (E)	22
DAV-S300 (AEP)	23
DAV-S300 (Australian)	25
DAV-S300 (Singapore/Hong Kong)	26
DAV-S300 (Chinese)	27

(2-5) Region
Region code is displayed.
Error: Not detected.
The region code determined from the model code is displayed.

3. Peripheral

(3-2) Gate Array Check
Data write → read, and accord check
Error 02: Gate array write/read discord
Data 0x00~0xFF are written to the address 0xF of GA (IC601), then read and checked if they accord.

(3-3) EEPROM Check
Data write → read, and accord check
Error 03: EEPROM write/read discord
Data 0x9249, 0x2942, 0x4294 are written to addresses 0x00~0xFF of EEPROM (IC201), then read and checked. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

4. Servo

(4-2) Servo DSP Check
Data write → read, and accord check
Error 12: Read data discord
Data 0x9249, 0x2942, 0x4294 are written to the address 0x602 of RAM in the Servo DSP (IC701), then read and checked.

(4-3) DSP Driver Test
Test signal data → DSP Driver
Error: Not detected.
Caution: Do not conduct this test with a mechanical deck connected.
The maximum voltage is applied to the Servo Driver IC (IC801, IC802). If mechanical deck is connected, the motor and optics could be damaged. Disconnect mechanical deck following the output message, then enter specified 4- or 5-digit number from the remote commander, and press the ENTER. The test is conducted only when the input data accord. Check the output level, then press the NEXT to finish the test.
This test is skipped if “All” is selected.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of MB-82/85 board. Also, disconnect harness from the CN011.

5. Supply

Caution: Do not conduct this check with a mechanical deck connected.
An access is made to the stream supply and servo control IC (IC303) and external RAM (IC304) using check data. If mechanical deck is connected, the motor and optics could be damaged. This check is also executed by the “All” menu item.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of DVD board. Also, disconnect harness from the CN011.

(5-2) ARP Register Check
Data write → read, and accord check
Error 08: ARP register write, and read data discord
Data 0x00 to 0xFF are written to the TMAX register (address 0xC6) in ARP (IC303), then they are read and checked.

(5-3) ARP to RAM Data Bus
Data write → read, and accord check
Error 09: ARP ←→ RAM data bus error
Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

(5-4) ARP to RAM Address Bus
Data write → other address read discord check
Error 10: ARP → RAM address bus error
Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).
Before starting the test, all addresses of RAM (IC304) are cleared to 0x0000.
First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.
If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```
    ### Syscon Diagnosis ###




 5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address    : 0000A55A
Write Data : 00000000
Read Data  : 00080000
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

(5-5) ARP RAM Check
Data write → read, and accord check
Error 11: ARP RAM read data discord
The program code data stored in ROM are copied to all areas of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.

6. AV Decoder

(6-2) 1930 RAM
Data write → read, and accord check
Error 13: AVD RAM read data discord
The program code data stored in ROM (IC205) are copied to all areas of RAM (IC402, IC403) connected to the AVD (IC401) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 13, and the test is suspended.

(6-3) 1930 SP
ROM → AVD RAM → Video OUT
Error: Not detected.
The data including sub picture streams in ROM (IC205) are transferred to the RAM (IC402, IC403) in AVD (IC401), and output as video signals from the AVD (IC401).
They are output from all video terminals (Composite, Y/C).

7. Video

(7-2) Color Bar
AVD color bar command write → Video OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.
They are output from all video terminals (Composite, Y/C).

8. Audio

(8-2) ARP → 1930
Error 14: ARP → 1930 video NG
15 : ARP → 1930 audio NG

Check Items List

2) Version
(2-2) Revision
(2-3) ROM Check Sum
(2-4) Model Type
(2-5) Region

3) Peripheral
(3-2) Gate Array Check
(3-3) EEPROM Check

4) Servo
(4-2) Servo DSP Check
(4-3) DSP Driver Test

5) Supply
(5-2) ARP Register Check
(5-3) ARP to RAM Data Bus
(5-4) ARP to RAM Address Bus
(5-5) ARP RAM Check

6) AV Decoder
(6-2) 1930 RAM
(6-3) 1930 SP

7) Video
(7-2) Color Bar

8) Audio
(8-2) ARP → 1930
(8-3) Test Tone

Error Codes List

00: Error not detected
01: RAM write/read data discord
02: Gate array NG
03: EEPROM NG
08: ARP register read data discord
09: ARP ←→ RAM data bus error
10: ARP ←→ RAM address bus error
11: ARP RAM read data discord
12: Servo DSP NG
13: 1930 SDRAM NG
14: ARP → 1930 video NG
15: ARP → 1930 audio NG
16: 1910 UCODE download NG
17: System call error (function not supported)
18: System call error (parameter error)
19: System call error (illegal ID number)
20: System call error (time out)
90: Error occurred
91: User verification NG
92: Diagnosis cancelled

4-4. DRIVE AUTO ADJUSTMENT

On the Test Mode Menu screen, press [1] key on the remote commander, and the drive auto adjustment menu will be displayed.

```
   ## Drive Auto Adjustment ##

         Adjustment Menu

0. ALL
1. DVD-SL
2. CD
3. DVD-DL
4. SACD



                   Exit: RETURN
```

Normally, [0] is selected to adjust DVD (single layer), CD, DVD (dual layer), and SACD in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen.
The disc used for adjustment must be the one specified for adjustment. However, for SACD disc, use the player with initial data if the disc is not available.

0. ALL

Select [0] and press [ENTER] key, and the servo set data in EEPROM will be initialized. Then, 1. DVD-SL disc, 2. CD disc, 3. DVD-DL disc, and 4. SACD disc are adjusted in this order. Each time one disc was adjusted, it is ejected. Replace it with the specified disc following the message. Though the message to confirm whether discs other than SACD disc are adjusted is not displayed, you can finish the adjustment if pressing the [STOP] button. During adjustment of each disc, the measurement for disc type judgment is made. As automatic adjustment does not judge the disc type unlike conventional models, take care not to insert wrong type discs. Also, do not give a shock during adjustment.

1. DVD-SL (single layer)

Select [1], insert DVD single layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Single Layer Disc Adjustment Steps
1. SLED TILT Reset
2. Disc Check Memory SL
3. Wait 300 msec
4. Set Disc Type SL
5. LD ON
6. Spdl Start
7. Wait 1 sec
8. Focus Servo ON 0
9. Auto Track Offset Adjust
10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. Wait 1 sec
14. Sled ON
15. Check CLV Lock
16. Auto LFO Adjust
17. Auto Focus Offset Adjust
18. Auto Tilt Position Adjust
19. Auto Focus Gain Adjust
20. Auto Focus Offset Adjust
21. EQ Boost Adjust
22. Auto LFO Adjust
23. Auto Track Gain Adjust, Search Check
24. 32Tj Fwd
25. 32Tj Rev
26. 500Tj Fwd
27. 500Tj Rev

28. All Servo Stop
29. Eep Copy Loop Filter Offset

2. CD

Select [2], insert CD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

CD Adjustment Steps
1. Sled Tilt Rest
2. Disc Check Memory CD
3. Wait 500 msec
4. Set Disc Type CD
5. LD ON
6. Spdl Start
7. Wait 500 msec
8. Focus Servo ON 0
9. Auto Track Offset Adjust

10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. (TC Display Start)
14. Wait 1 sec
15. Jitter Display Start
16. Sled ON
17. Check CLV ON
18. Auto LFO Adjust
19. Auto Focus Offset Adjust
20.
21. Auto Focus Gain Adjust
22. Auto Focus Offset Adjust
23. Eq Boost Adjust
24. Auto LFO Adjust
25. Auto Track Gain Adjust, Search Check
26. 32Tj Fwd
27. 32Tj Rev
28. 500Tj Fwd
29. 500Tj Rev

30. All Servo Stop

3. DVD-DL (dual layer)

Select [3], insert DVD dual layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Dual Layer Disc Adjustment Steps
1. Sled Tilt Reset
2. Disc Check Memory DL
3. Wait 500 msec
4. Set Disc Type DL
5. LD ON
6. Spdl Start
7. Wait 1 sec, Layer 1 Adjust
8. Focus Servo ON 0
9. Auto Track Offset Adjust

10. Clva ON
11. Wait 500 msec
12. Tracking ON
13. Wait 500 msec
14. Sled ON
15. Check CLV Lock
16. Auto Loop Filter Offset Auto Focus Adjust
17.
18. Auto Focus Gain Adjust
19. Auto Focus Offset Adjust
20. Eq Boost Adjust
21. Auto Loop Filter Offset
22. Auto Track Gain Adjust, Search Check
23. 32Tj Fwd
24. 32Tj Rev
25. 500Tj Fwd
26. 500Tj Rev, Layer 0 Adjust
27. Fj (L1 -> L0)
28. Auto Track Offset Adjust L0

29. Clva ON
30. Wait 500 msec
31. Tracking ON
32. Wait 500 msec
33. Sled ON
34. Check CLV Lock
35. Auto Focus Filter Offset
36. Auto Focus Adjust
37.
38. Auto Focus Gain Adjust
39. Auto Focus Offset Adjust
40. Eq Boost Adjust
41. Auto Loop Filter Offset
42. Auto Track Gain Adjust, Search Check
43. 32Tj Fwd
44. 32Tj Rev
45. 500Tj fwd
46. 500Tj Rev, Layer Jump Check
47. Lj (L0 -> L1)
48. Lj (L1 -> L0)

49. All Servo Stop

4. SACD

Select [4], insert SACD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. However, if SACD disc is not available, use the player with initial data, skipping the SACD adjustment. In this case, you can finish the adjustment if pressing the [STOP] button.

SACD Adjustment Steps
1. Sled Tilt Reset
2. Set Disc Type CD
3. LD ON
4. Spdl Start
5. Wait 500 msec
6. Focus Servo ON 0
7. Auto track Offset Adjust
8.
9. CLVA ON
10. Wait 500 msec
11. Tracking ON
12. Wait 1 sec
13. Sled ON
14. Check CLV ON
15. Auto Focus Offset Adjust
17.
18. Auto Focus Gain Adjust
19. Auto Focus Offset Adjust
20. Eq Boost Adjust
21. Auto LFO Adjust
22. Auto Track Gain Adjust

23. 32Tj Fwd
24. 32Tj Rev
25. 500Tj Fwd
26. 500Tj Rev

27. All Servo Stop */

4-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select [2], and the manual operation menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
  ## Drive Manual Operation ##

         Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check

0. Disc Check Memory

                 Exit: Return
```

In using the manual operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

1. Set correctly the disc type to be used on the Disc Type screen.
   The disc type must be set after a disc was loaded.
   The set disc type is cleared when the tray is opened.
2. After power ON, if the Drive Manual Operation was selected, first perform “Reset SLED TILT” by opening 1. Disc Type screen.
3. In case of an alarm, immediately press the [STOP] button to stop the servo operation, and turn the power OFF.

Basic operation (controllable from front panel or remote commander)

[POWER]	Power OFF
[STOP]	Servo stop
[OPEN/CLOSE]	Stop+Eject/Loading
[RETURN]	Return to Operation Menu or Test Mode Menu
[NEXT], [PREV]	Transition between sub modes of menu
[1] to [9], [0]	Selection of menu items
Cursor UP/DOWN	Increase/Decrease in manually adjusted value

0. Disc Check Memory

```
          Disc Check



1. SL Disc Check
2. CD Disc Check
3. DL Disc Check



0. Reset SLED TILT
```

On this screen, the mirror time is measured to judge the disc and it is written to the EEPROM. First load DVD SL disc and press [1], next load CD disc and press [2], and finally load DVD DL disc and press [3].
The adjustment must be executed more than once after default data were written. External vibration or shock to the player must not be given. Reference value for DVD is from 10 to 20, and for CD, from 28 to 4F.
Check that the value of CD is larger than that of DVD.
When those values are beyond a range perform this adjustment again.
From this screen, you can go to another mode by pressing [NEXT] or [PREV] key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

1. Disc Type

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
                        EMG. 00
```

On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting [1] automatically selects and displays the disc type. In case of wrong display, retry “Disc Check Memory”. Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.
In performing manual operation, the disc type must be set.
Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm     ___
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
       SA.      SI.    EMG. 00
DVD SL 12 cm
```

Display when DVD SL 12cm disc was selected

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
        TC.——:——:—— EMG. 00
CD   12 cm
```

Display when CD 12cm disc was selected

[0] Reset SLED TILT — Reset the Sled and Tilt to initial position.

[1] Disk Type Check — Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct.
If Disc Check Memory menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).

[2] to [9] — Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if [1] was selected.

2. Servo Control

```
         Servo Control
1. LD         Off R.Sled FWD
2. SP         Off L.Sled REV
3. Focus      Off
4. TRK.       Off
5. Sled       Off
6. CLVA       Off
7. FCS. Srch Off


0. Reset SLED TILT
       SA.———— SI.—— EMG. 00
DVD SL 12 cm
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

[0] Reset SLED TILT	Reset the Sled and Tilt to initial position.
[1] LD	Turn ON/OFF the laser.
[2] SP	Turn ON/OFF the spindle.
[3] Focus	Search the focus and turn on the focus.
[4] TRK	Turn ON/OFF the tracking servo.
[5] Sled	Turn ON/OFF the sled servo.
[6] CLVA	Turn ON/OFF normal servo of spindle servo.
[7] FCS. Srch	Apply same voltage as that of focus search to the focus drive to check the focus drive system.
[→] Sled FWD	Move the sled outward. Perform this operation with the tracking servo turned off.
[←] Sled REV	Move the sled inward. Perform this operation with the tracking servo turned off.
[↑] Tilt UP	Move the tilt upward.
[↓] Tilt DOWN	Move the tilt downward.

The following menus are normally not used.

3. Track/Layer Jump

4. Manual Adjustment

5. Auto Adjustment

The persons who do not know well about these menus should not use them.

6. Memory Check

```
EEPROM DATA
                CD       - DVD -
ID No. 00      SACD     SL  L0  L1
Focus Gain     xx xx    xx  xx  xx
TRK. Gain      xx xx    xx  xx  xx
Focus Offset   xx xx    xx  xx  xx
TRK. Offset    xx xx    xx  xx  xx
L. F. Offset   xx xx    xx  xx  xx
EQ Boost       xx xx    xx  xx  xx
Jitter         xx xx    xx  xx  xx
Mirror Time    xx xx    xx  xx  xx
_
CLEAR: Default Set
```

This screen displays current servo adjusted data stored in the EEPROM. Though adjusted data can be initialized with the [CLEAR] key, they cannot be restored after initialization.
So, before clearing, make a note of the adjusted data.
For reference, the drive has been designed so that the gain center value is 20 and offset value is 80. Other values will be in a range of 10 to 80. If extreme value such as 00 or FF is set, adjustment will be faulty. In such a case, check for disc scratch or cable disconnection, then perform adjustment again.

4-6. MECHA AGING

```
      ### Mecha Aging ###



1. TRAY Aging

2. SEARCH Aging


Abort: STOP key
```

On the Test Mode Menu Screen, selecting [3] executes the aging of the mechanism. TRAY aging or SEARCH aging are selected by [1] or [2]. Start aging with PLAY. During aging, the repeat cycle is displayed. Aging can be aborted at any time by pressing the [STOP] key. After the operation is stopped, press the [STOP] key or [RETURN] key again to return to the Test Mode Menu. SEARCH Aging is only for a CD.

4-7. EMERGENCY HISTORY

```
      ### MEG. History ###

Laser Hours     CD   xxxxxxxh
                DVD  xxxxxxxh

1. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

2. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

Select: 1 - 9  Scroll: UP/DOWN
(1: Last EMG.)  Exit: Return
```

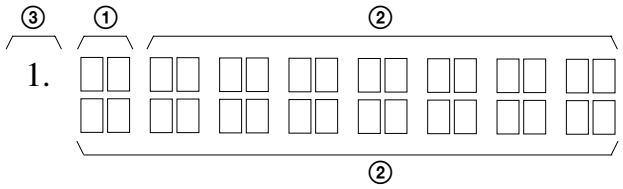
On the Test Mode Menu screen, selecting [4] displays the information such as servo emergency history. The history information from last 1 up to 10 can be scrolled with [↑] key or [↓] key. Also, specific information can be displayed by directly entering that number with ten keys.

The upper two lines display the laser ON total hours. Data below minutes are omitted.

Clearing History Information

Clearing laser hours
◎ Press [DISPLAY] and [CLEAR] keys in this order.
Both CD and DVD data are cleared.
Clearing emergency history
◎ Press [TITLE] and [CLEAR] keys in this order.
Initializing set up data
◎ Press [DVD] and [CLEAR] keys in this order.
The data have been initialized when "Set Up Initialized" message is displayed. The EMG. History screen will be restored soon.

How to see Emergency History



① : Emergency Code
② : Don't Care
These codes are used for verification of software designing.
③ : Historical order 1 to 9

Emergency Codes List

10: Communication to IC001 (TK board) failed.
11: Each servo for focus, tracking, and spindle is unlocked.
12: Communication to EEPROM, IC201 (DVD board) failed.
13: Writing of hours meter data to EEPROM, IC201 (DVD board) failed.
14: Communication to Servo DSP IC701 (DVD board) failed, or Servo DSP is faulty.
20: Initialization of tilt servo and sled servo failed. They are not placed in the initial position.
21: Tilt servo operation error
22: Syscon made a request to move the tilt servo to wrong position.
23: Sled servo operation error
24: Syscon made a request to move the sled servo to wrong position.
30: Tracking balance adjustment error
31: Tracking gain adjustment error
32: Focus balance adjustment error
33: Focus bias adjustment error
34: Focus gain adjustment error
35: Tilt servo adjustment error
36: RF equalizer adjustment error
37: RF group delay adjustment error
38: Jitter value after adaptive servo operation is too large.
40: Focus servo does not operate.
41: With a dual layer (DL) disc, focus jump failed.50: CLV (spindle) servo does not operate.
51: Spindle does not stop.
60: With a DVD disc, Syscon made a request to seek nonexistent address.
61: With a CD disc, Syscon made a request to seek nonexistent address.
62: With a CD disc, Syscon made a request to seek nonexistent track No. and index No.
63: With a DVD disc, seeking of target address failed.
64: With a CD disc, seeking of target address failed.
65: With a CD disc, seeking of target index failed.
70: With a DVD disc, physical information data could not be read.
71: With a CD disc, TOC data could not be read.
80: Disc type judgment failed.
81: As disc type judgment failed, retry was repeated.
82: As disc type judgment failed, a measurement error occurred.
83: Disc type could not be judged within the specified time.
84: Illegal command code was received from Syscon.
85: Illegal command was received from Syscon.

4-8. VERSION INFORMATION

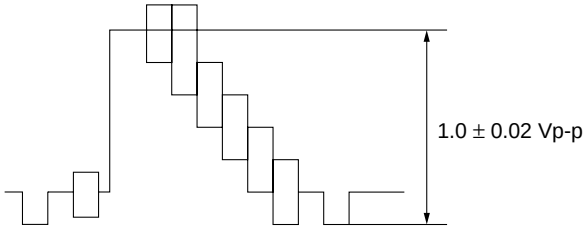
```
   ## Version Information ##

IF con.    Ver. x. xxx (xxxx)
           Group    00

SYScon.    Ver. x. xxx (xxxx)
           Model    xx
           Region   0x
           SW1      ??
           SW2      ??

Exit: RETURN
```

On the Test Mode Menu screen, selecting [5] displays the ROM version and region code.
The parenthesized hexadecimal number in version field is checksum value of ROM.

4-9. VIDEO LEVEL ADJUSTMENT

On the Test Mode Menu screen, selecting [6] displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing any key.

Measurement point : LINE OUT VIDEO
(75 Ω terminating resistance)
Measuring instrument : Oscilloscope
Adjustment device : RV401 on DVD board
Specified value : 1.0 ± 0.02 Vpp



SECTION 5
ELECTRICAL ADJUSTMENTS

In making adjustment, refer to 5-2. Adjustment Related Parts Arrangement.

RE-ADJUSTMENT OF THE SERVO CIRCUIT
The re-adjustment of the servo circuit is necessary when the part which relates to the servo circuit is replaced.
Referring to "4-4. DRIVE AUTO ADJUSTMENT" (see page 12), Choose ALL and do the re-adjustment of each item of DVD-SL, CD and DVD-DL.

THE PART THAT THE RE-ADJUSTMENT OF THE SERVO CIRCUIT IS NECESSARY
1. Optical pick-up
2. RF AMP (IC001)
3. DSP IC (IC701)
4. Motor driver IC (IC801,802)
5. EEPROM (IC201)

Note: During diagnostic check, the characters and color bars can be seen only with the NTSC monitor. Therefore, for diagnostic check, use the monitor that supports both NTSC and PAL modes

This section describes procedures and instructions necessary for adjusting electrical circuits in this set.

Instruments required:
1) Color monitor TV
2) Oscilloscope 1 or 2 phenomena, band width over 100 MHz, with delay mode
3) Frequency counter (over 8 digits)
4) Digital voltmeter
5) Standard commander
   * RM-SS300 (1-418-838-11)
6) DVD reference disc
   HLX-501 (J-6090-071-A) (dual layer)
   HLX-503 (J-6090-069-A) (single layer)
   HLX-504 (J-6090-088-A) (single layer)
   HLX-505 (J-6090-089-A) (dual layer)
7) SACD reference disc
   HLXA-509 (J-6090-090-A)

   * Use only the designated remote control when adjusting this system component.

5-1. ADJUSTMENT OF VIDEO SYSTEM

1. Video Level Adjustment (DVD BOARD)

<Purpose>
This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	LINE OUT (VIDEO) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV401
Specification	1.0 ± 0.02 Vp-p

Adjusting method:
1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Adjust the RV401 to attain 1.0 ± 0.02 Vp-p.

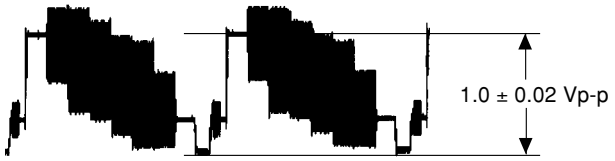


Figure 5-1

2. S-terminal Output Check (DVD BOARD)

<Purpose>
Check S-terminal video output. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with a S-terminal cable.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.0 ± 0.1 Vp-p

Checking method:
1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-Y level is 1.0 ± 0.1 Vp-p.

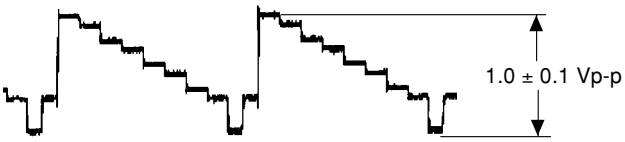


Figure 5-2

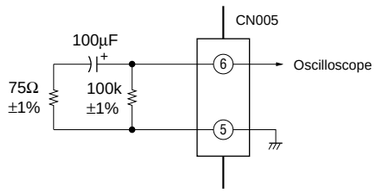
3. Checking S Video Output S-C (DVD BOARD)

<Purpose>

This checks whether the S-C satisfies the NTSC Standard. If it is not correct, the colors will be too dark or light.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	CN005 pin ⑥
Instrument	Oscilloscope
Specification	286 ± 50 mVp-p

Connection:



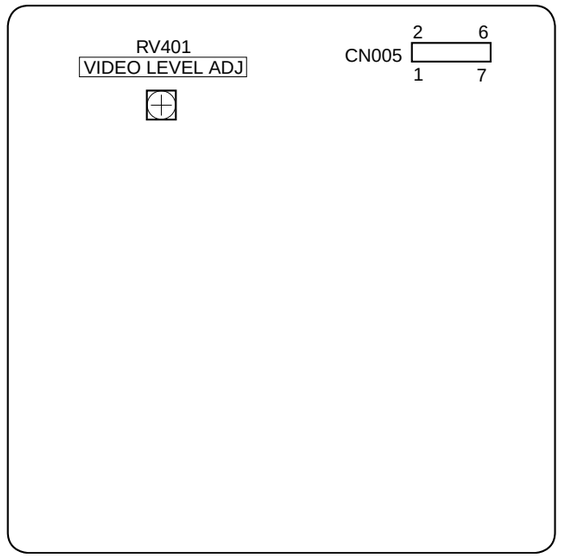
Checking method:

1) Confirm that the S-C burst is 286 ± 50 mVp-p.

Figure 5-3

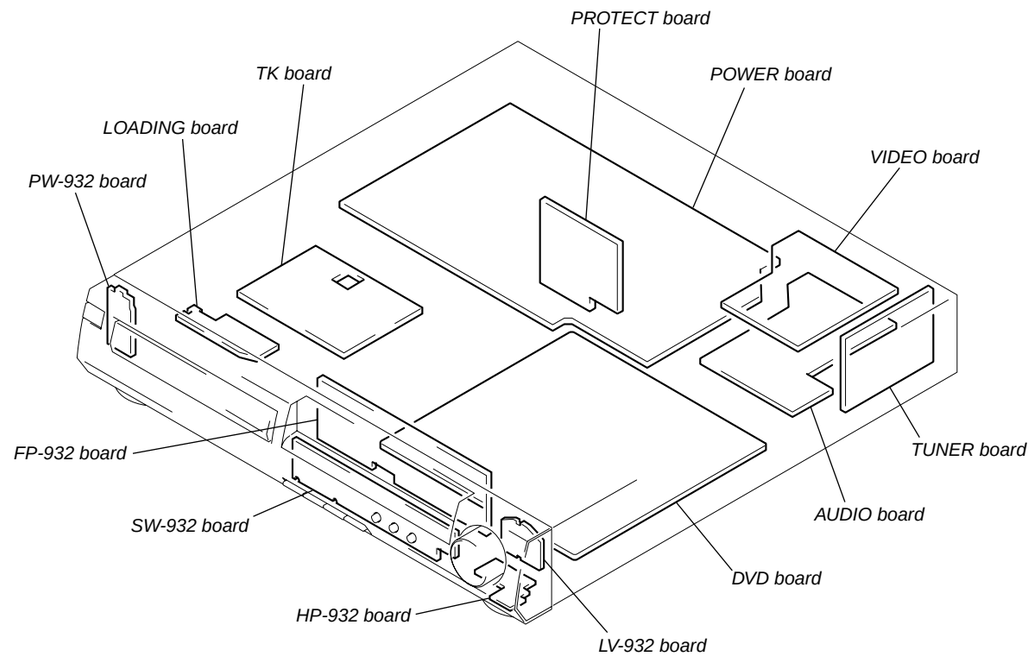
5-2. ADJUSTMENT RELATED PARTS ARRANGEMENT

DVD BOARD (SIDE A)



SECTION 6 DIAGRAMS

6-1. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

以阴影和⚠标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages and waveforms are dc with respect to ground in service mode.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
  no mark : STOP
- Circled numbers refer to waveforms.
- Signal path.
  : DVD/CD
  : AUDIO
  : VIDEO
  : C
  : Y
- Abbreviation
  SP : Singapore model.
  HK : Hong Kong model.
  AUS : Australian model.
  MX : Mexican model.
  CND : Canadian model.
  E32 : Cantral & South America model.

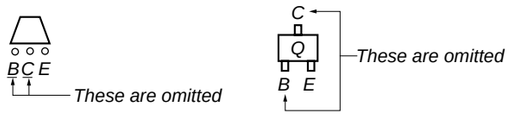
For printed wiring boards.

Note:

- ○——— : parts extracted from the component side.
- ○ : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

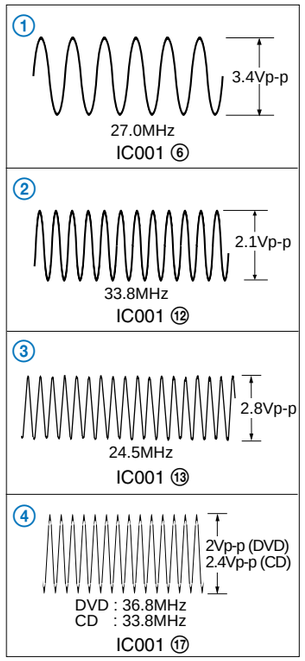
(The other layers' patterns are not indicated.)

• Indication of transistor

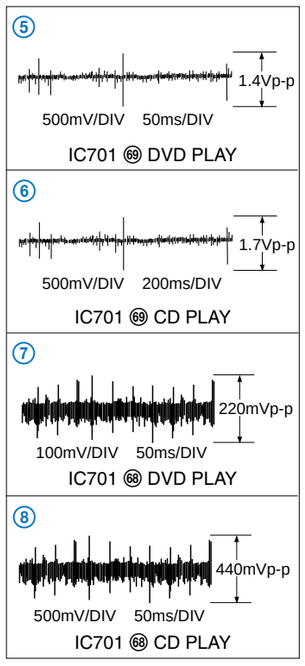


WAVEFORMS

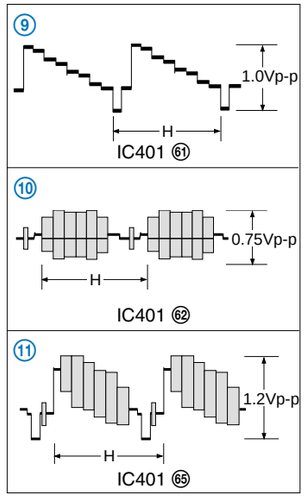
– DVD (1/12) SECTION –



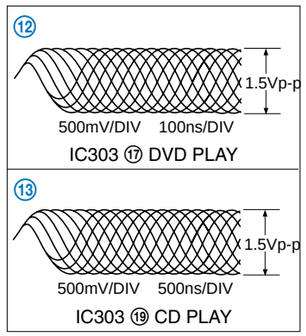
– DVD (2/12) SECTION –


⑤ 1.4Vp-p 500mV/DIV 50ms/DIV IC701 ⑥⑨ DVD PLAY
⑥ 1.7Vp-p 500mV/DIV 200ms/DIV IC701 ⑥⑨ CD PLAY
⑦ 220mVp-p 100mV/DIV 50ms/DIV IC701 ⑥⑧ DVD PLAY
⑧ 440mVp-p 500mV/DIV 50ms/DIV IC701 ⑥⑧ CD PLAY

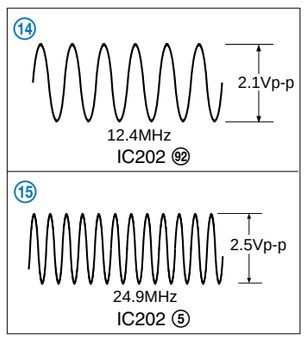
– DVD (4/12) SECTION –



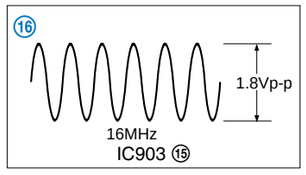
– DVD (5/12) SECTION –



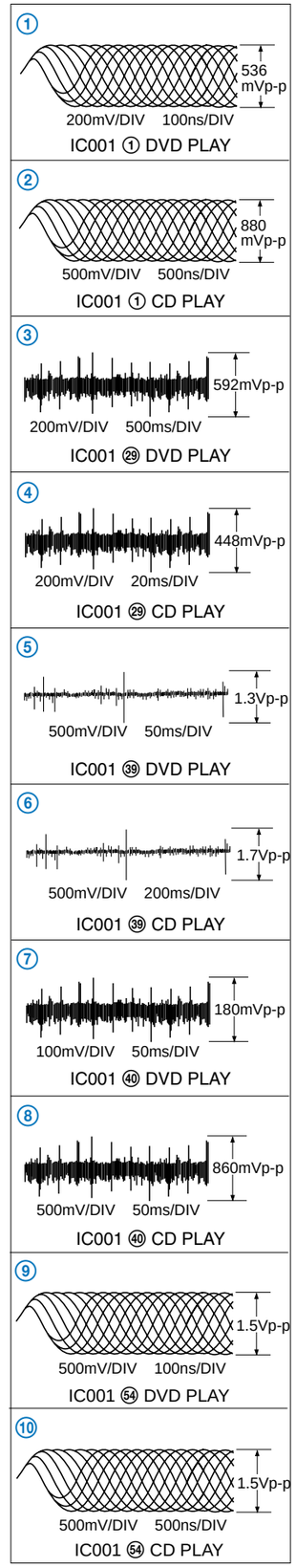
– DVD (8/12) SECTION –



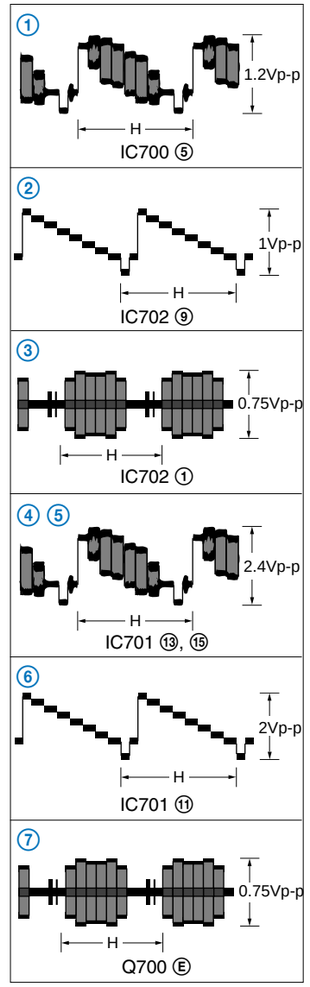
– DVD (10/12) SECTION –



– TK SECTION –

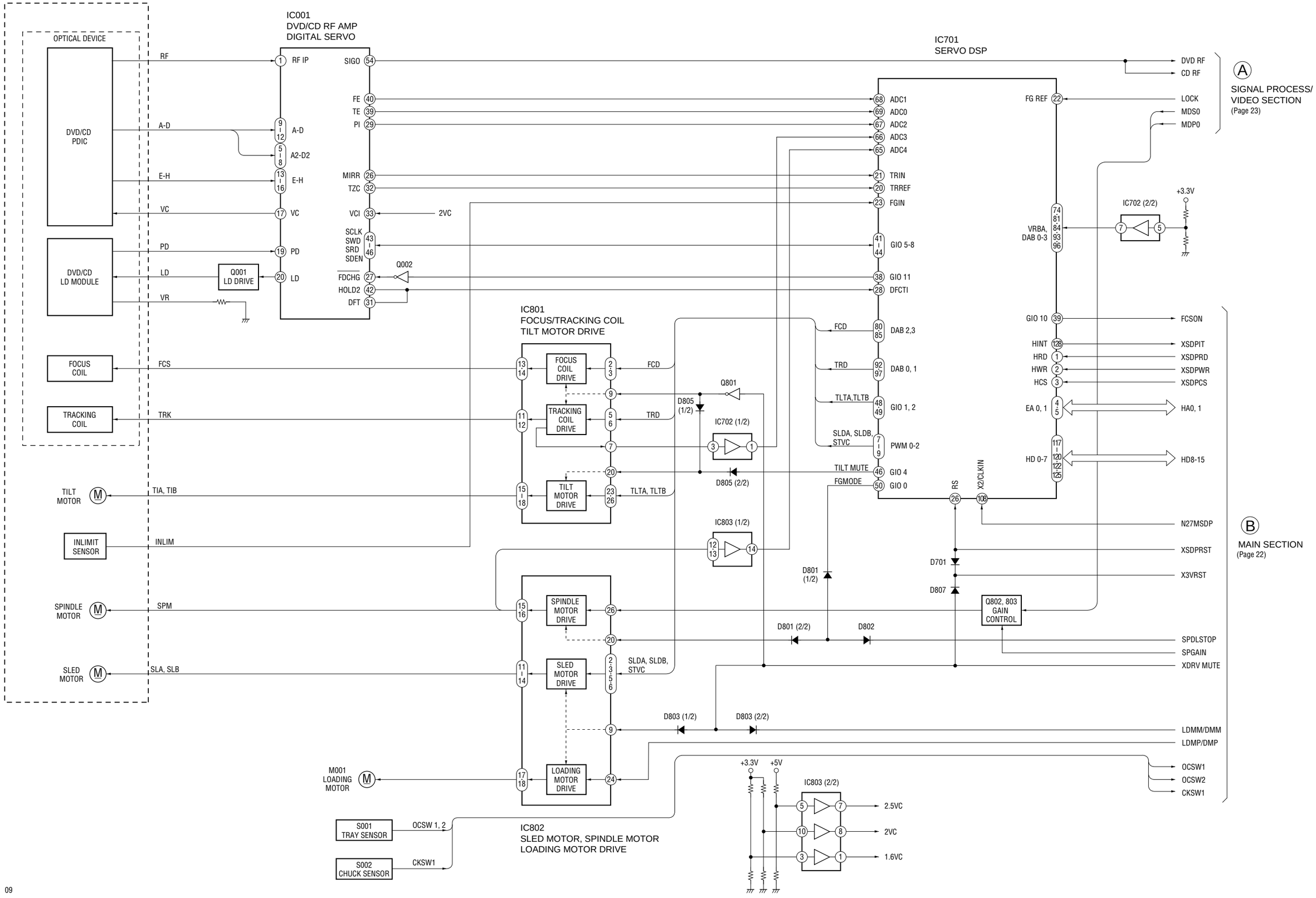

① 536 mVp-p 200mV/DIV 100ns/DIV IC001 ① DVD PLAY
② 880 mVp-p 500mV/DIV 500ns/DIV IC001 ① CD PLAY
③ 592mVp-p 200mV/DIV 500ms/DIV IC001 ㉙ DVD PLAY
④ 448mVp-p 200mV/DIV 20ms/DIV IC001 ㉙ CD PLAY
⑤ 1.3Vp-p 500mV/DIV 50ms/DIV IC001 ㊴ DVD PLAY
⑥ 1.7Vp-p 500mV/DIV 200ms/DIV IC001 ㊴ CD PLAY
⑦ 180mVp-p 100mV/DIV 50ms/DIV IC001 ㊵ DVD PLAY
⑧ 860mVp-p 500mV/DIV 50ms/DIV IC001 ㊵ CD PLAY
⑨ 1.5Vp-p 500mV/DIV 100ns/DIV IC001 ㊹ DVD PLAY
⑩ 1.5Vp-p 500mV/DIV 500ns/DIV IC001 ㊹ CD PLAY

– VIDEO SECTION –



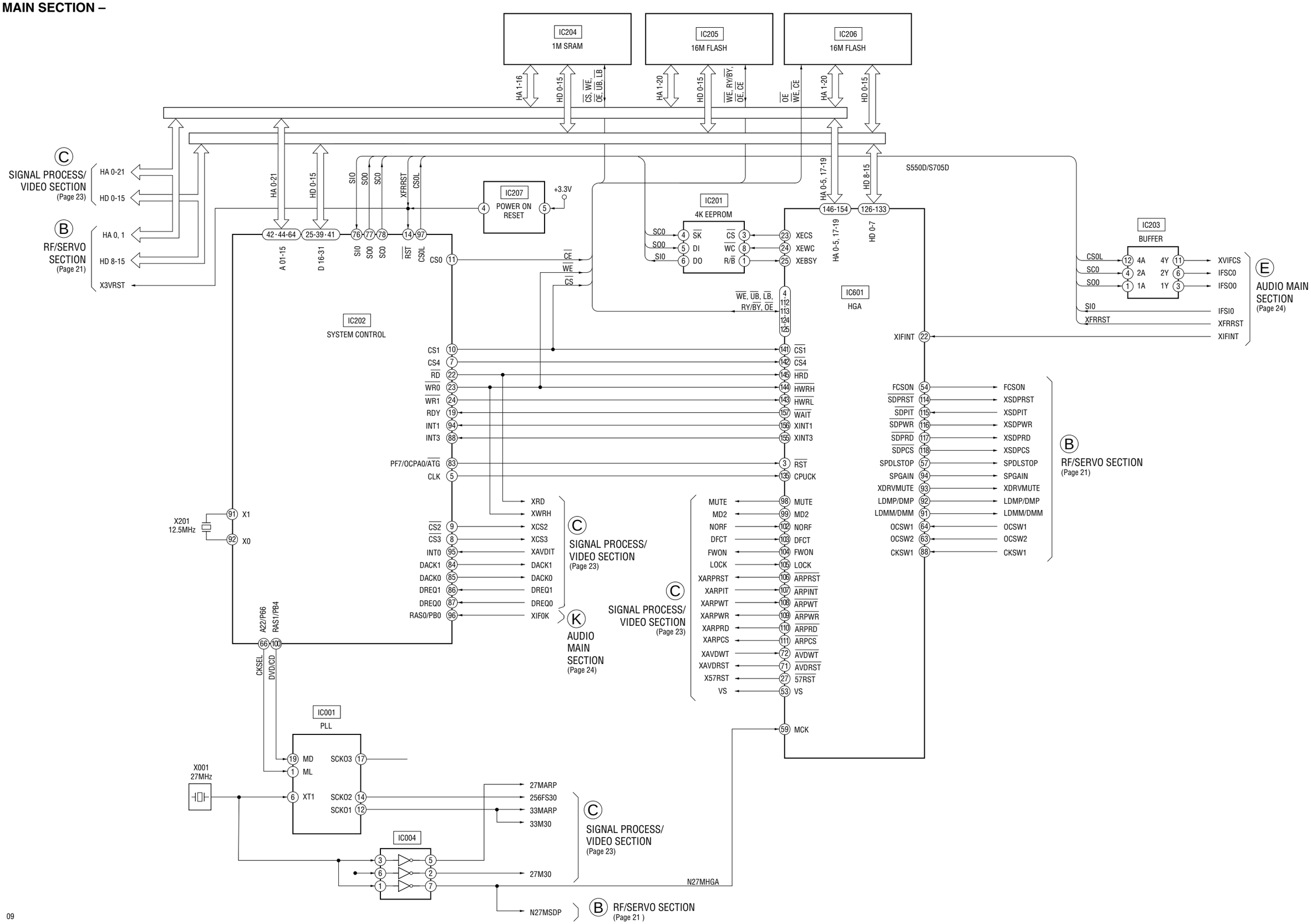
20

6-2. BLOCK DIAGRAMS
– RF/SERVO SECTION –

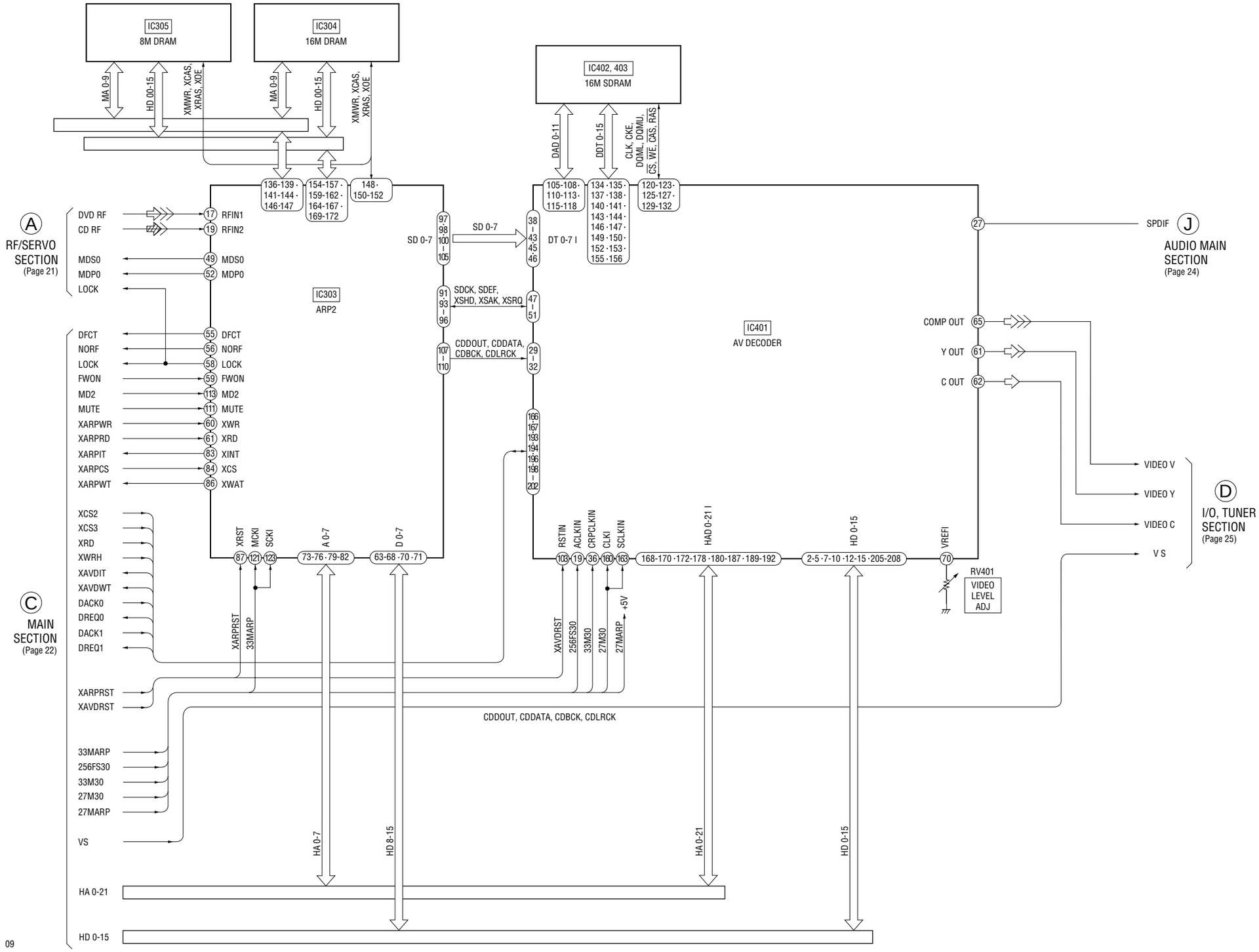


09

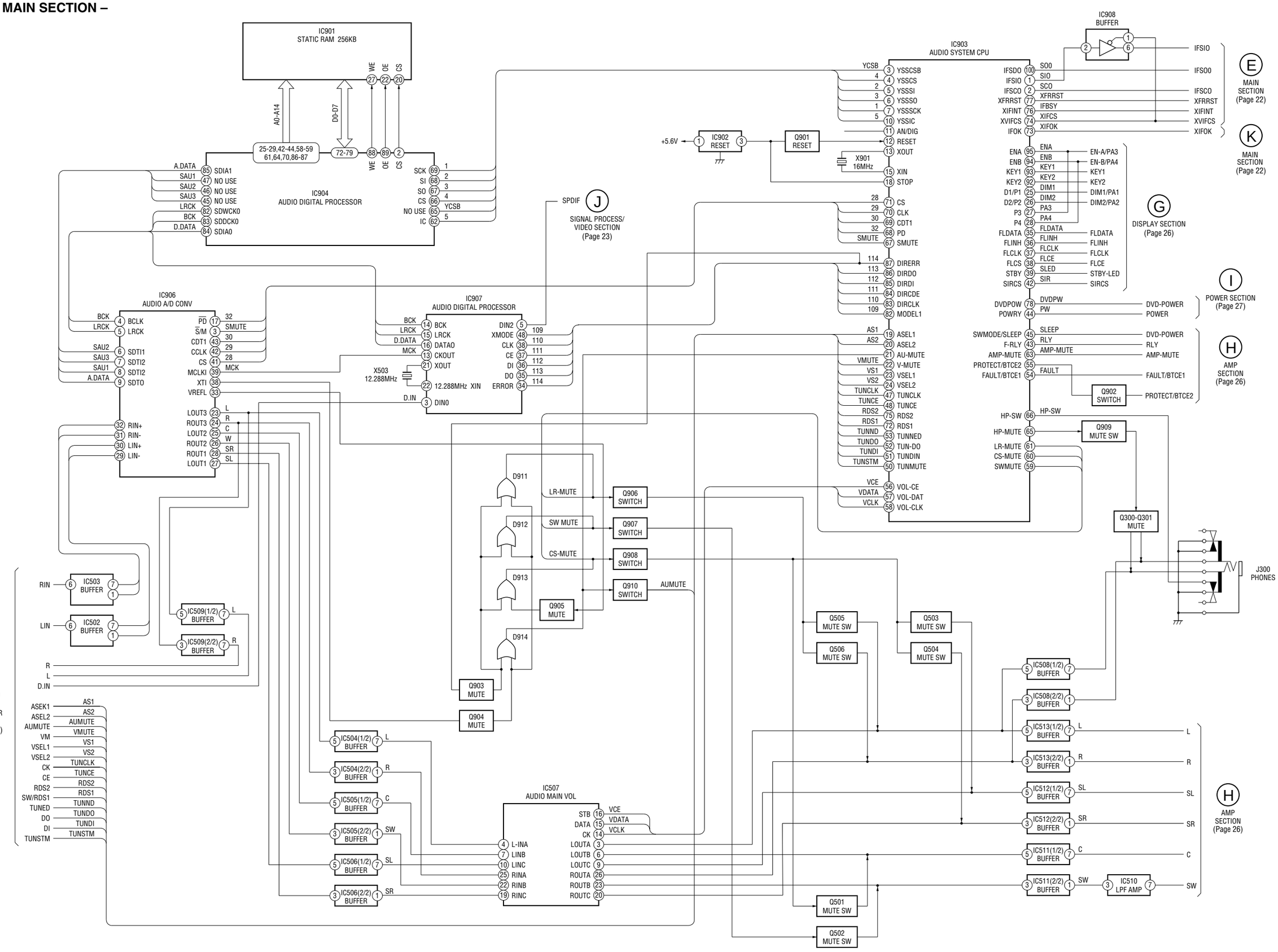
– MAIN SECTION –



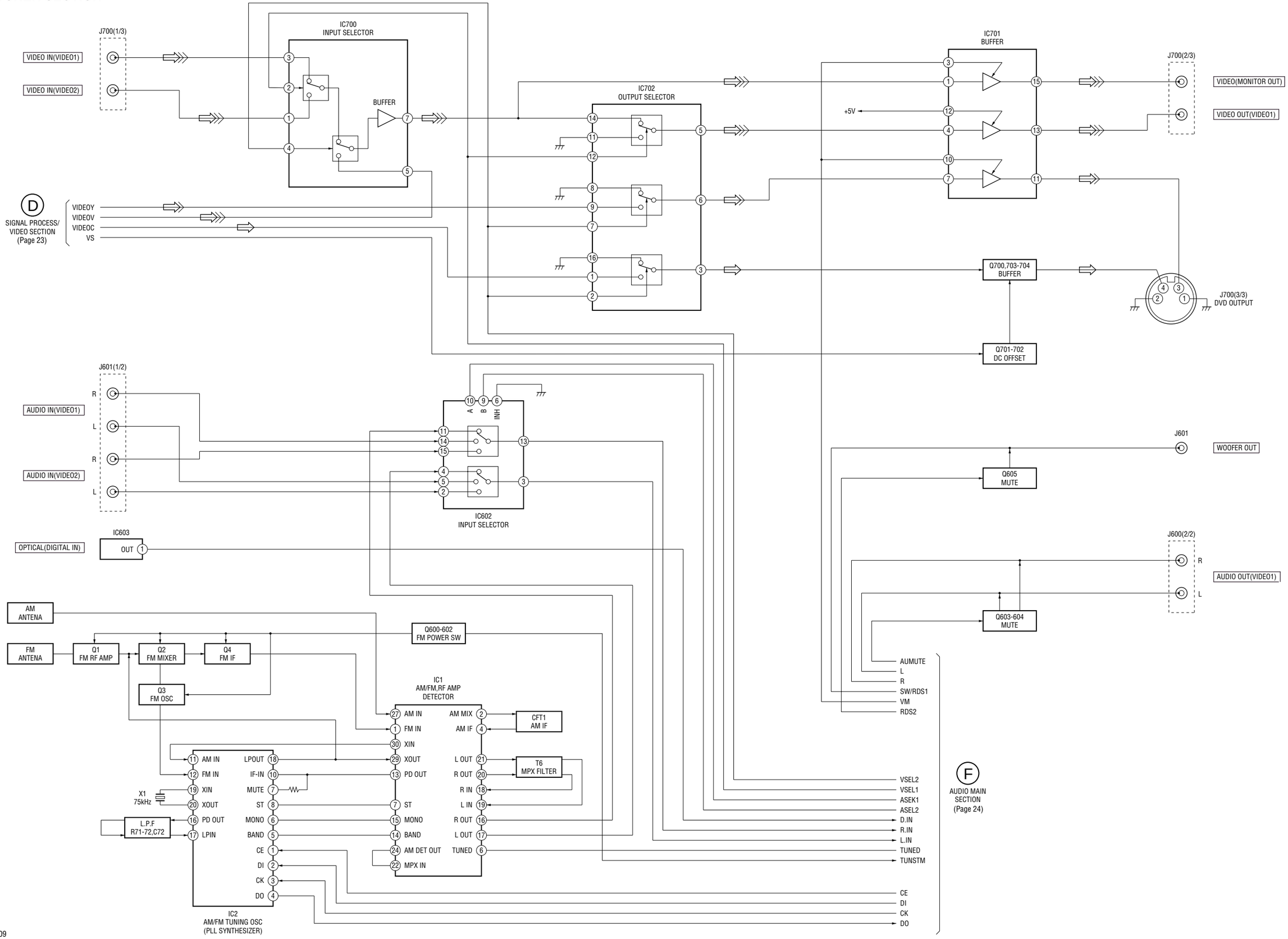
– SIGNAL PROCESS/VIDEO SECTION –



– AUDIO MAIN SECTION –

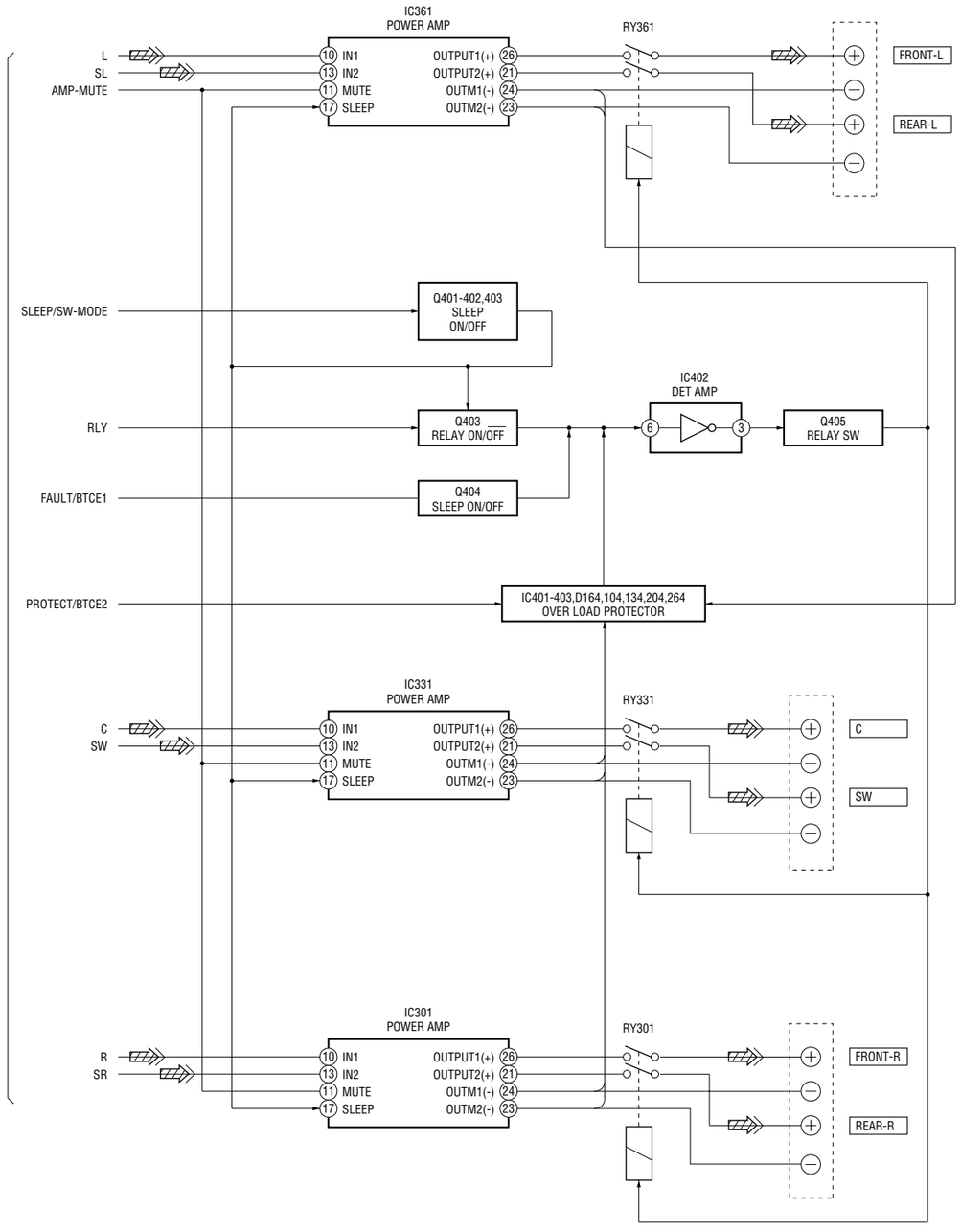


– I/O, TUNER SECTION –



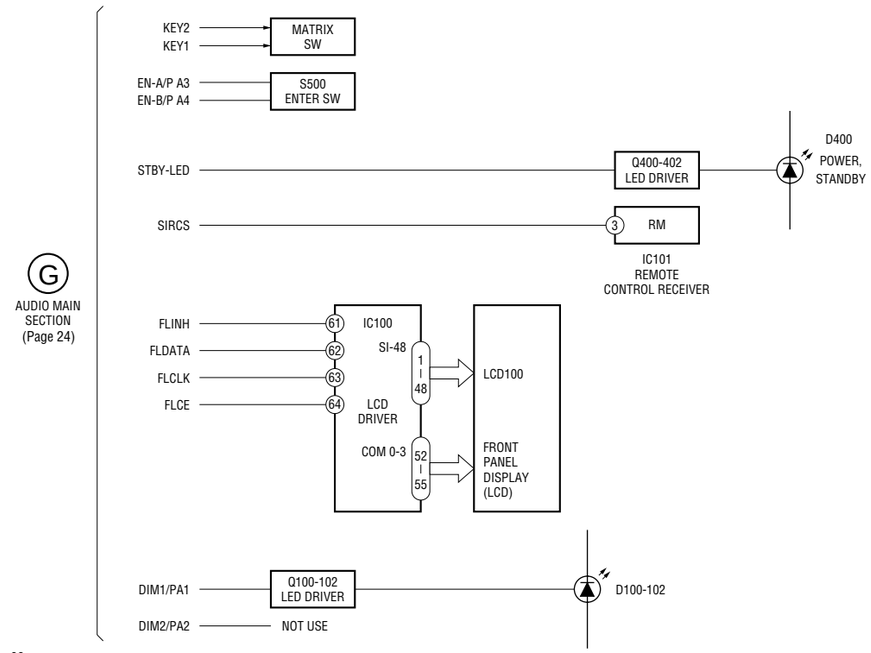
09

– AMP SECTION –



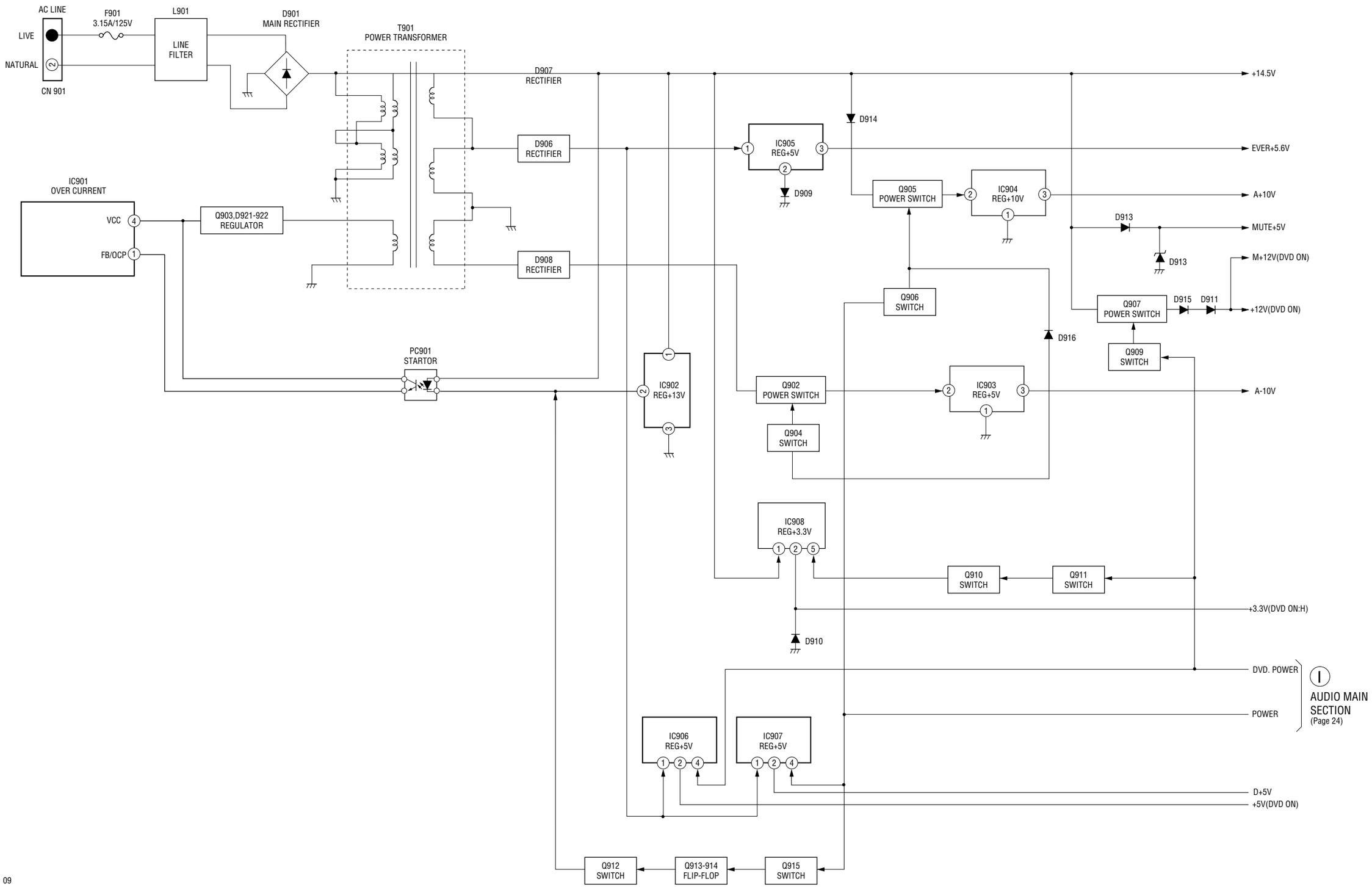
09

– DISPLAY SECTION –



09

– POWER SECTION –

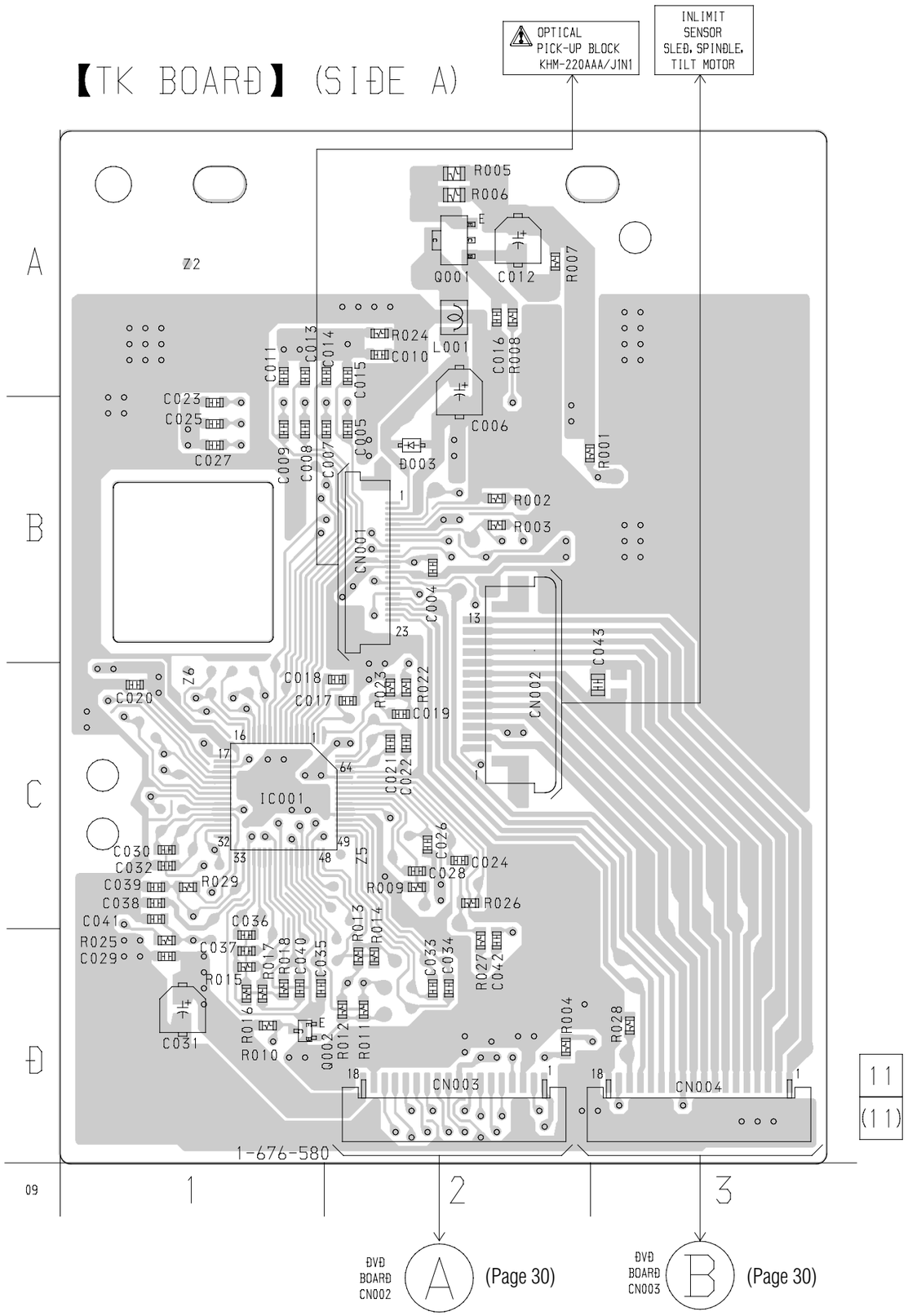


09

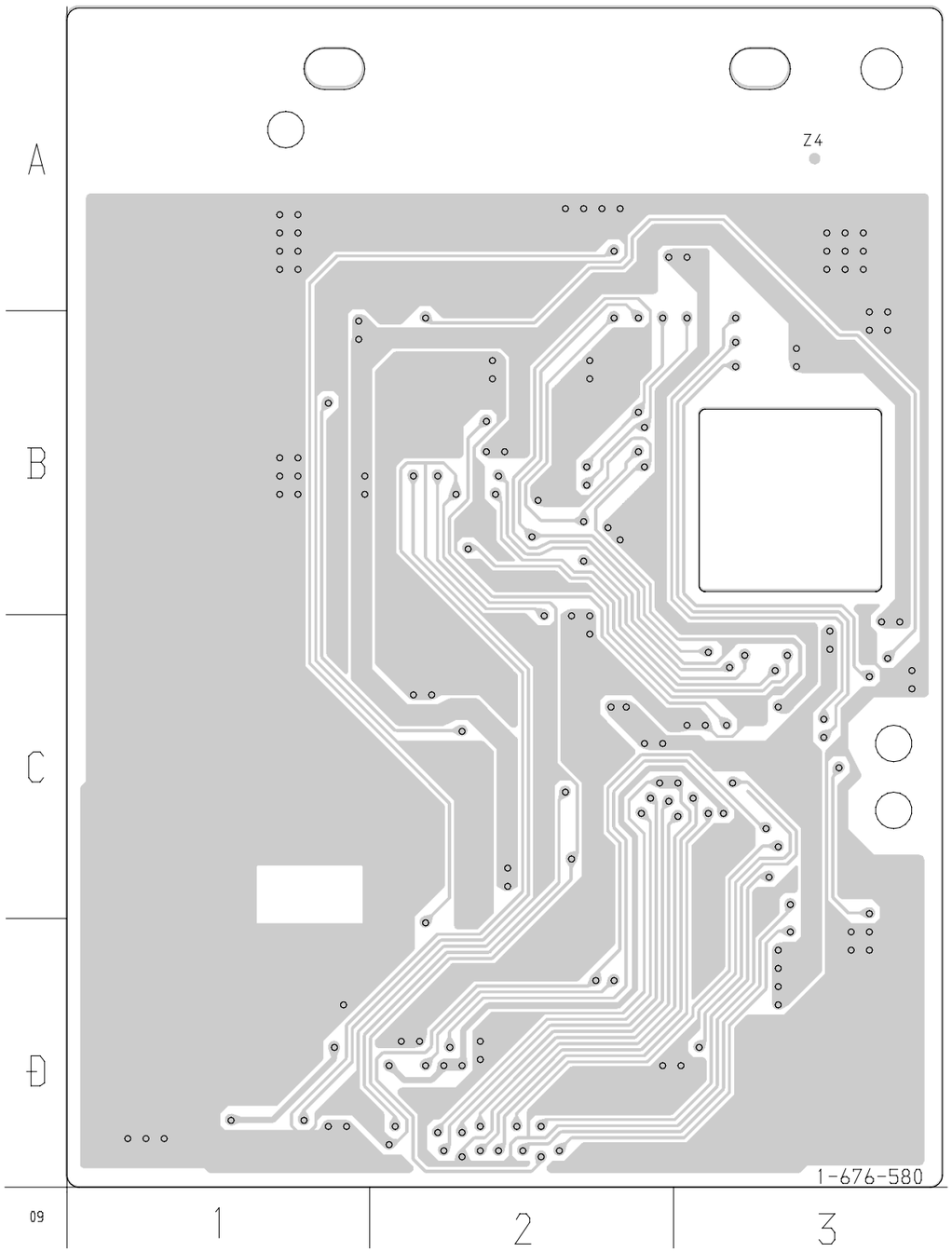
6-3. PRINTED WIRING BOARD – TK SECTION –

• See page 19 for Circuit Boards Location.

【TK BOARÐ】 (SIÐE A)



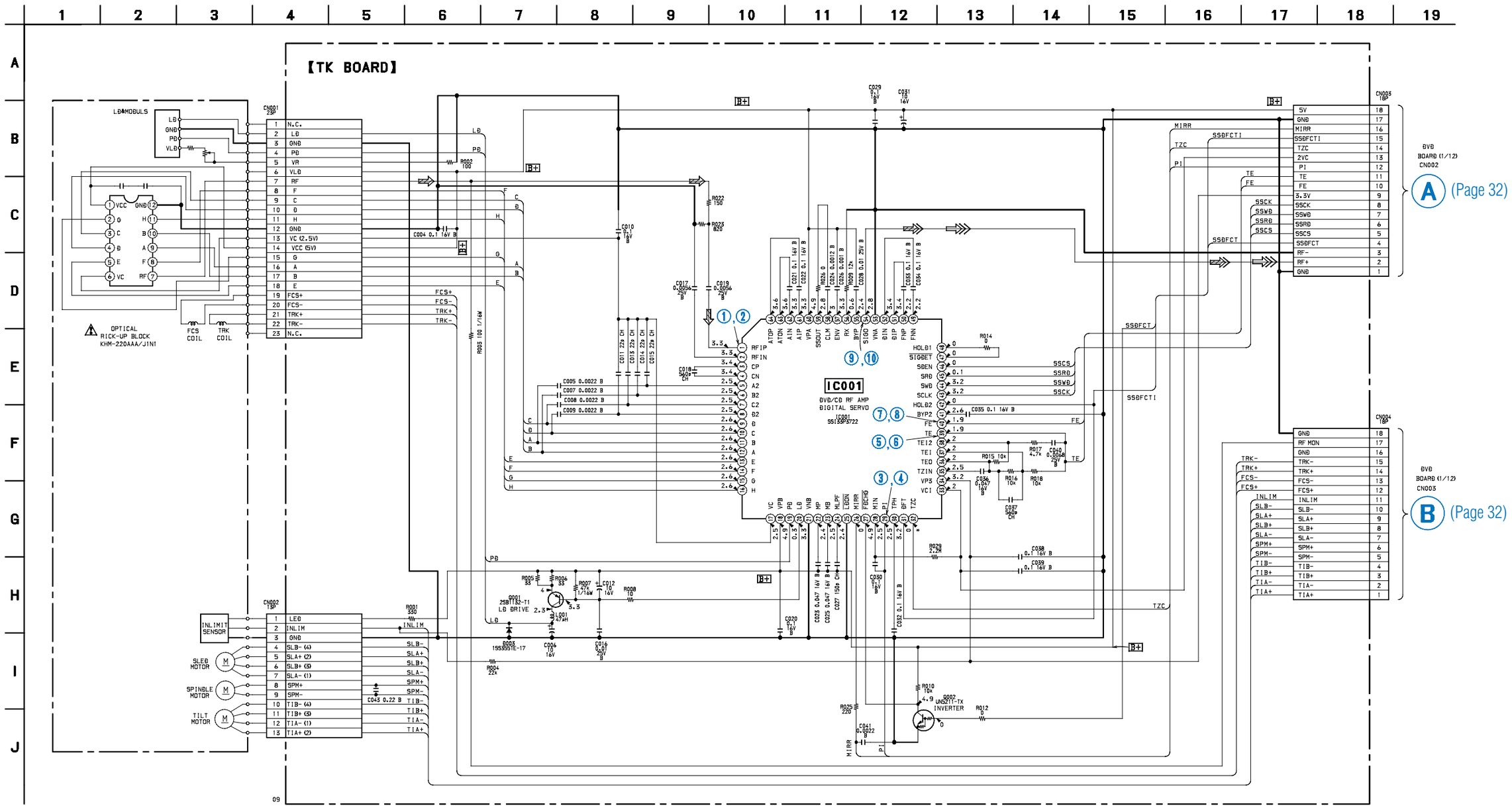
【TK BOARÐ】 (SIÐE B)



28

6-4. SCHEMATIC DIAGRAM – TK SECTION –

• See page 20 for Waveforms.

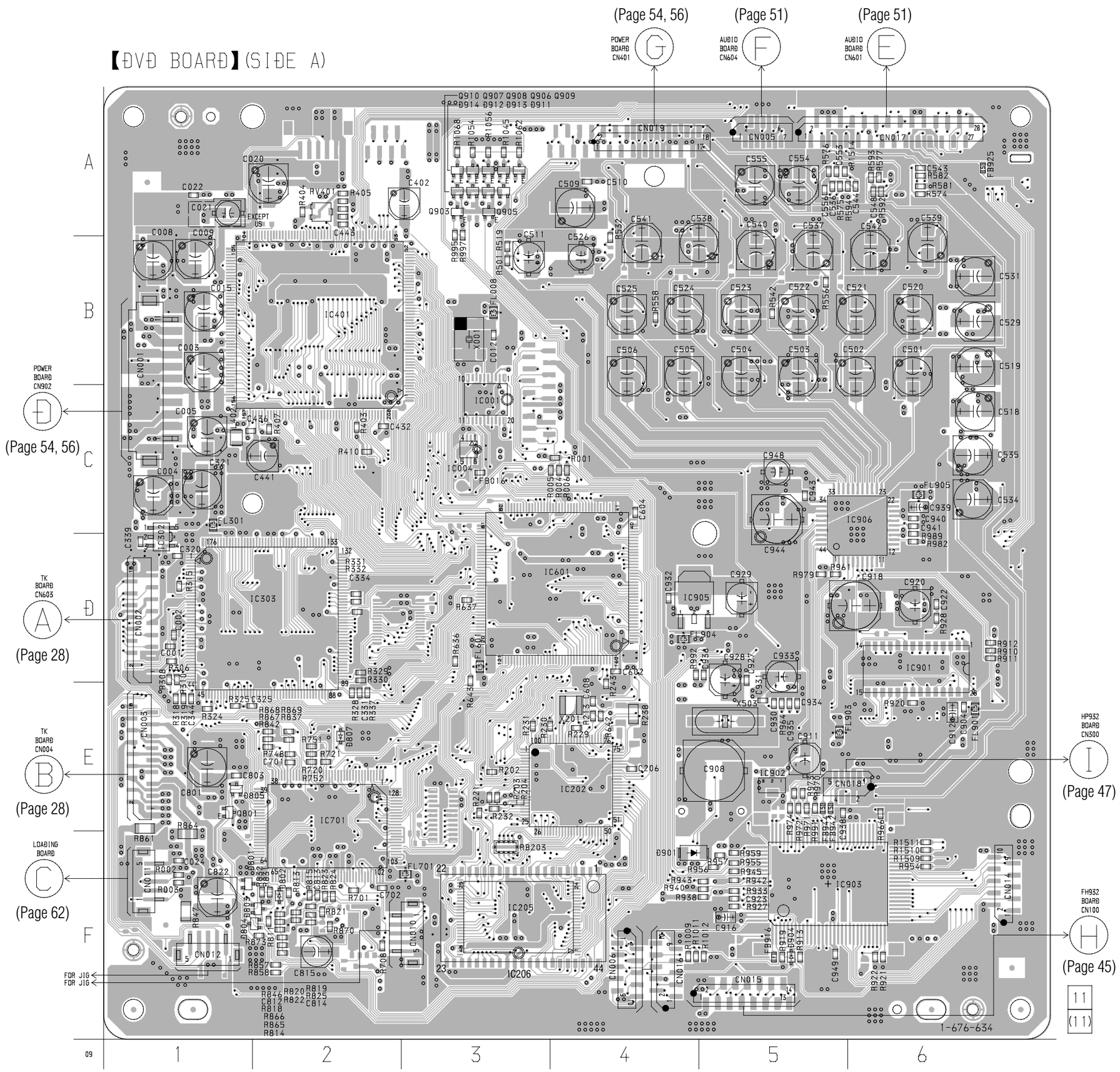


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

6-5. PRINTED WIRING BOARD – DVD SECTION –

• See page 19 for Circuit Boards Location.

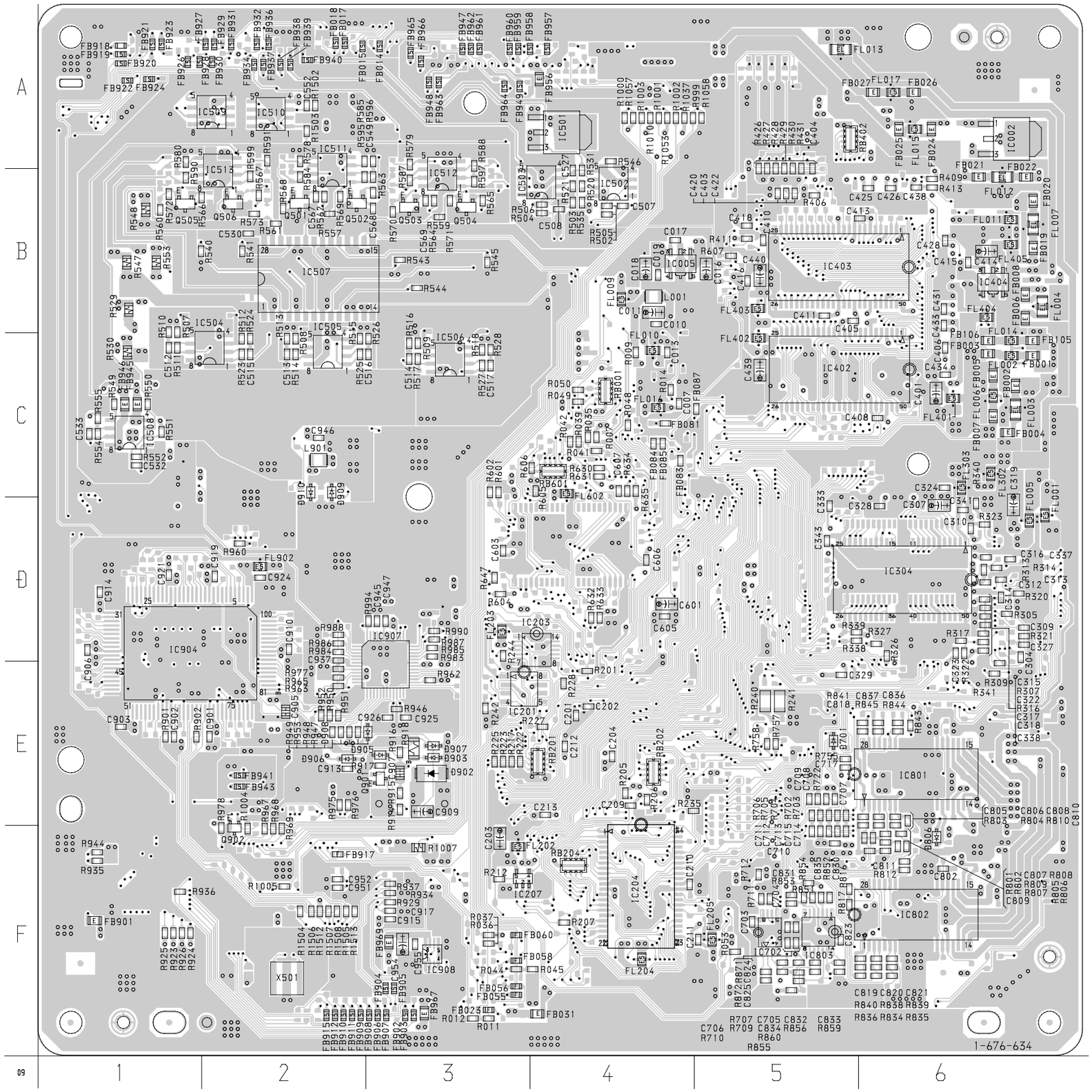


• **Semiconductor Location**

Ref. No.	Location
D801	F-1
D802	F-2
D803	F-1
D804	F-1
D805	E-1
D807	E-2
D901	F-4
D904	F-5
D911	A-3
D912	A-3
D913	A-3
D914	A-3
IC001	C-3
IC004	C-3
IC202	E-4
IC205	F-3
IC206	F-3
IC302	D-1
IC303	D-2
IC401	B-2
IC601	D-3
IC701	E-2
IC901	D-6
IC902	E-5
IC903	F-5
IC905	D-4
IC906	C-6
Q801	E-1
Q903	A-3
Q905	A-3
Q906	A-3
Q907	A-3
Q908	A-3
Q909	A-3
Q910	A-3

• IC206 is repair parts of IC205

【ÐVÐ BOARÐ】(SIÐE B)

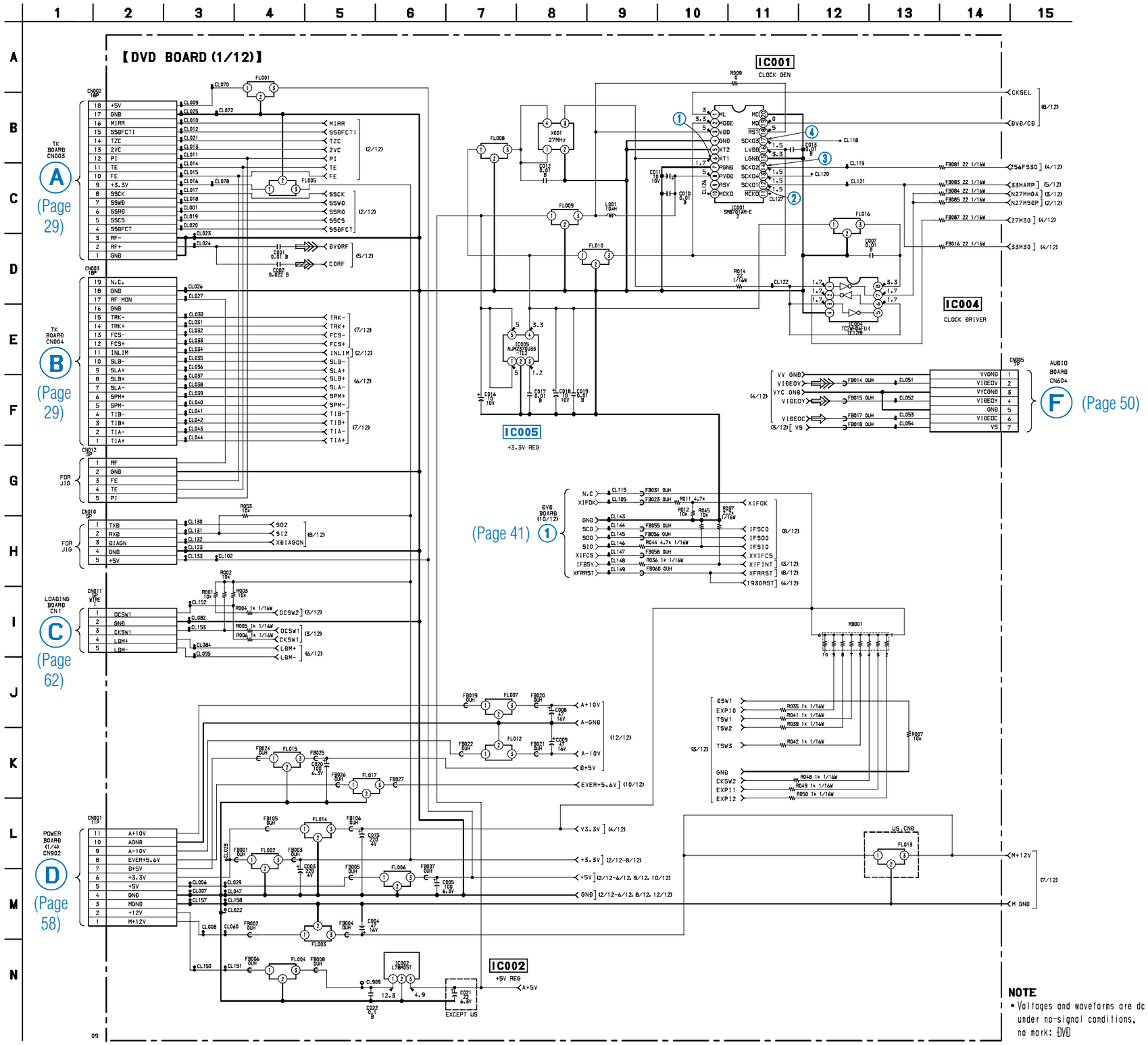


- **Semiconductor Location**

Ref. No.	Location
D701	E-5
D806	F-6
D902	E-3
D903	E-3
D905	E-2
D906	E-2
D907	E-3
D908	E-2
D909	C-2
D910	C-2
IC002	A-6
IC005	B-4
IC201	E-3
IC203	D-4
IC204	F-4
IC207	F-3
IC304	D-6
IC402	C-5
IC403	B-5
IC404	B-6
IC501	A-4
IC502	B-4
IC503	B-3
IC504	B-2
IC505	C-2
IC506	C-3
IC507	B-2
IC508	C-1
IC509	A-2
IC510	A-2
IC511	A-2
IC512	B-3
IC513	B-2
IC702	F-5
IC801	E-6
IC802	F-6
IC803	F-5
IC904	D-1
IC907	D-3
IC908	F-3
Q501	B-2
Q502	B-2
Q503	B-3
Q504	B-3
Q505	B-1
Q506	B-2
Q901	E-3
Q902	F-2

6-6. SCHEMATIC DIAGRAM – DVD (1/12) SECTION –

- See page 20 for Waveforms.
- See page 30 for Printed Wiring Board.
- See page 63 for IC Block Diagrams.

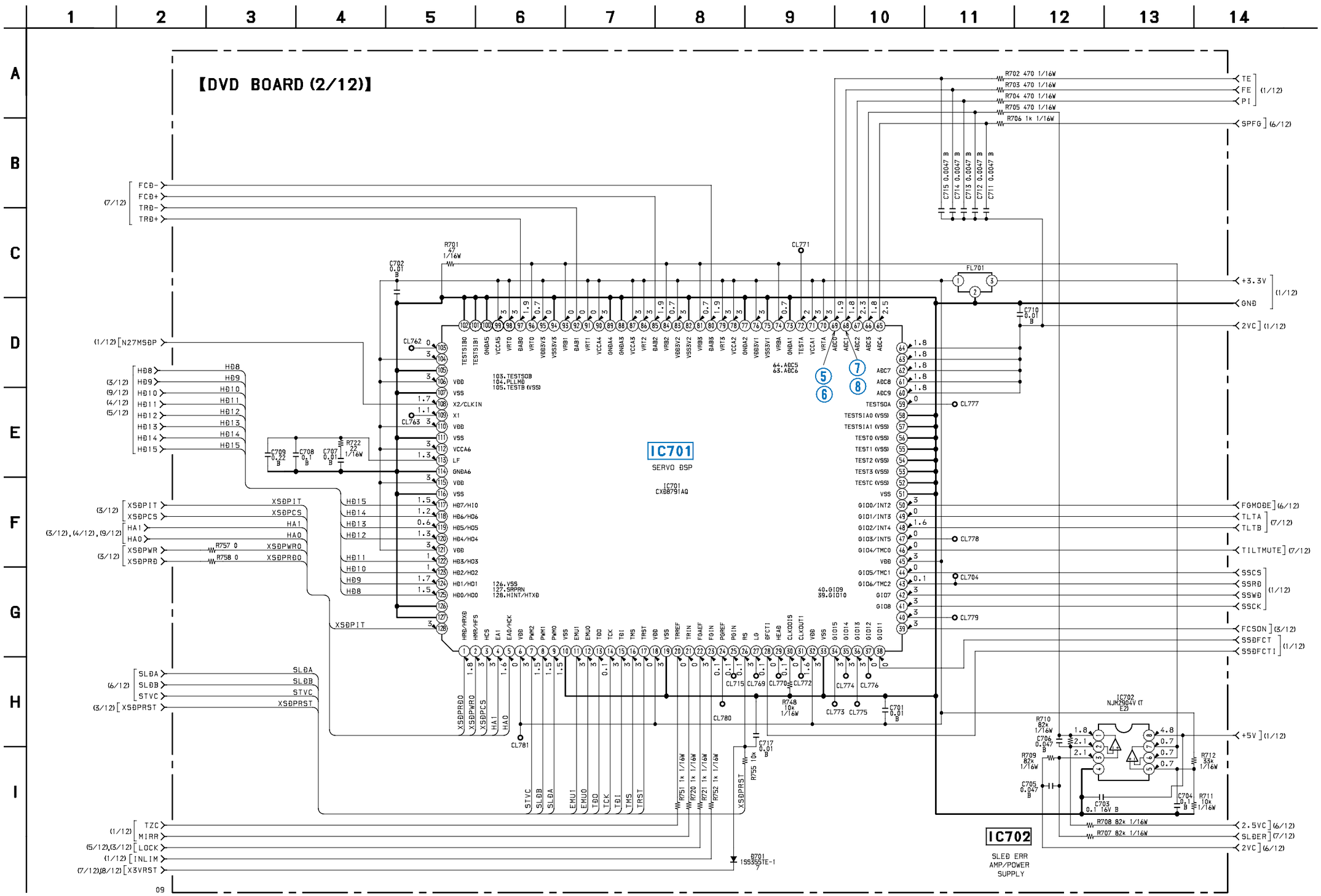


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

6-7. SCHEMATIC DIAGRAM – DVD (2/12) SECTION –

- **See page 20 for Waveforms.**
- **See page 30 for Printed Wiring Board.**
- **See page 65 for IC Block Diagrams.**

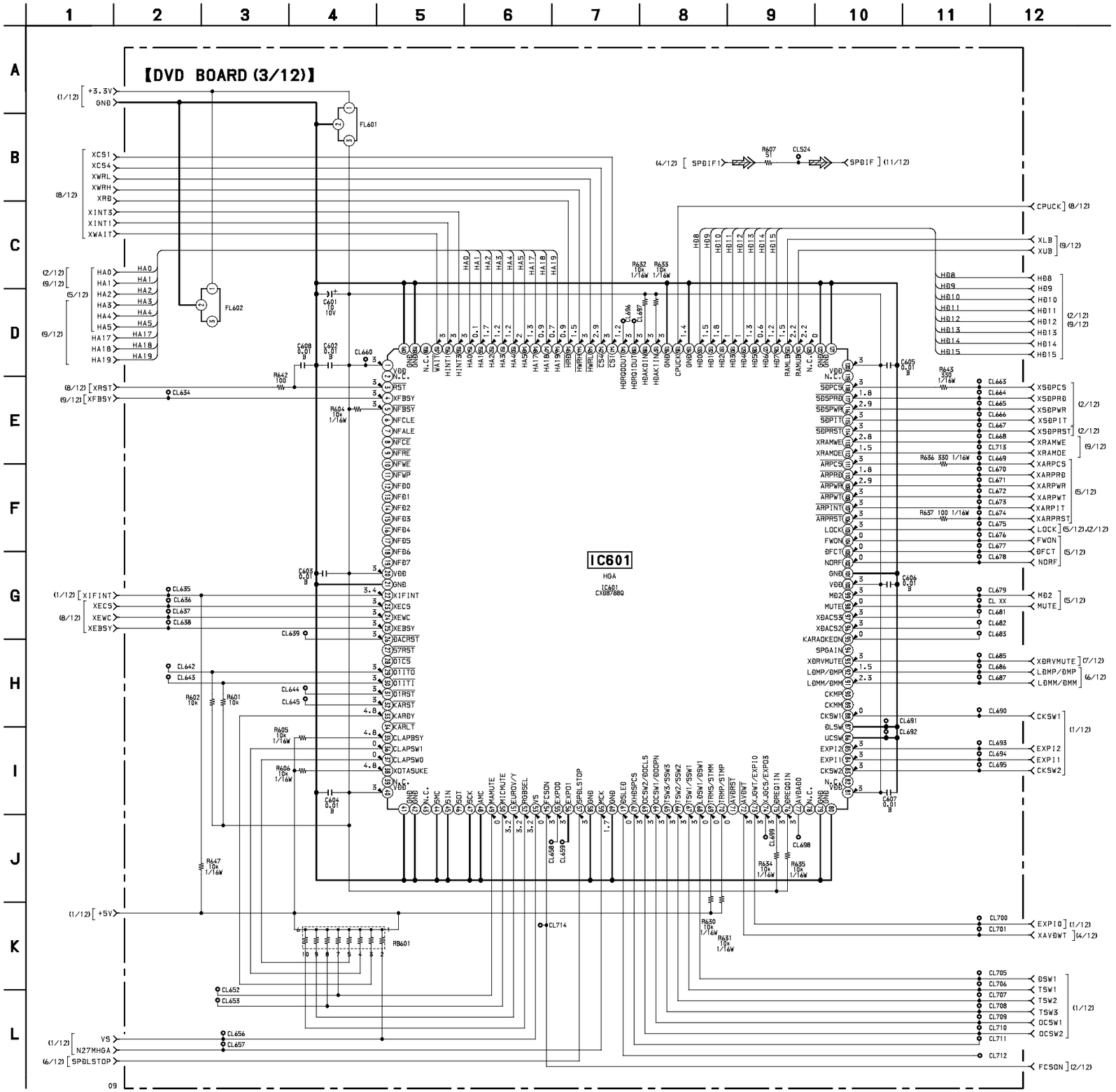


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

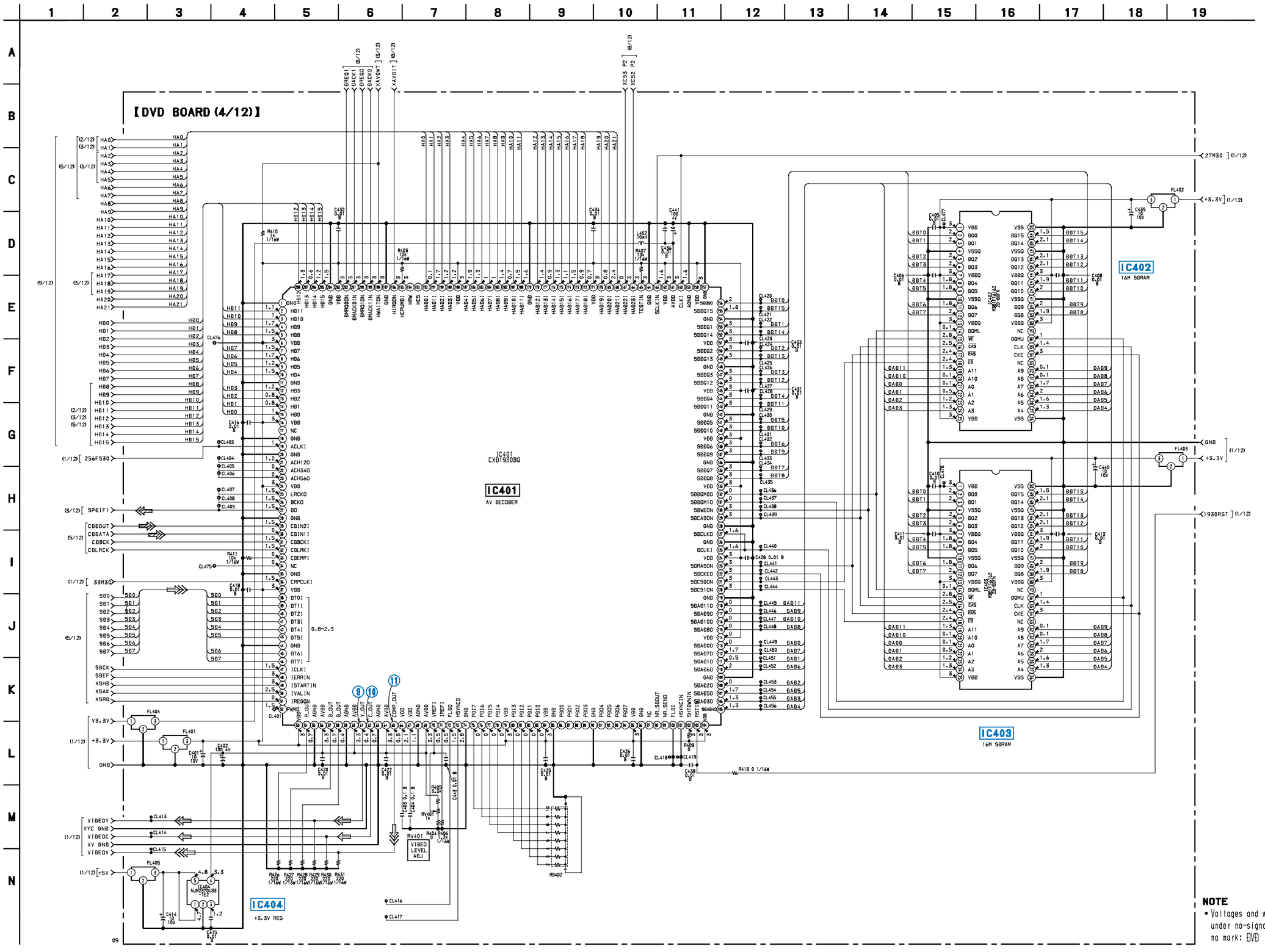
6-8. SCHEMATIC DIAGRAM – DVD (3/12) SECTION –

- See page 20 for Waveforms.
- See page 30 for Printed Wiring Board.
- See page 65 for IC Block Diagrams.



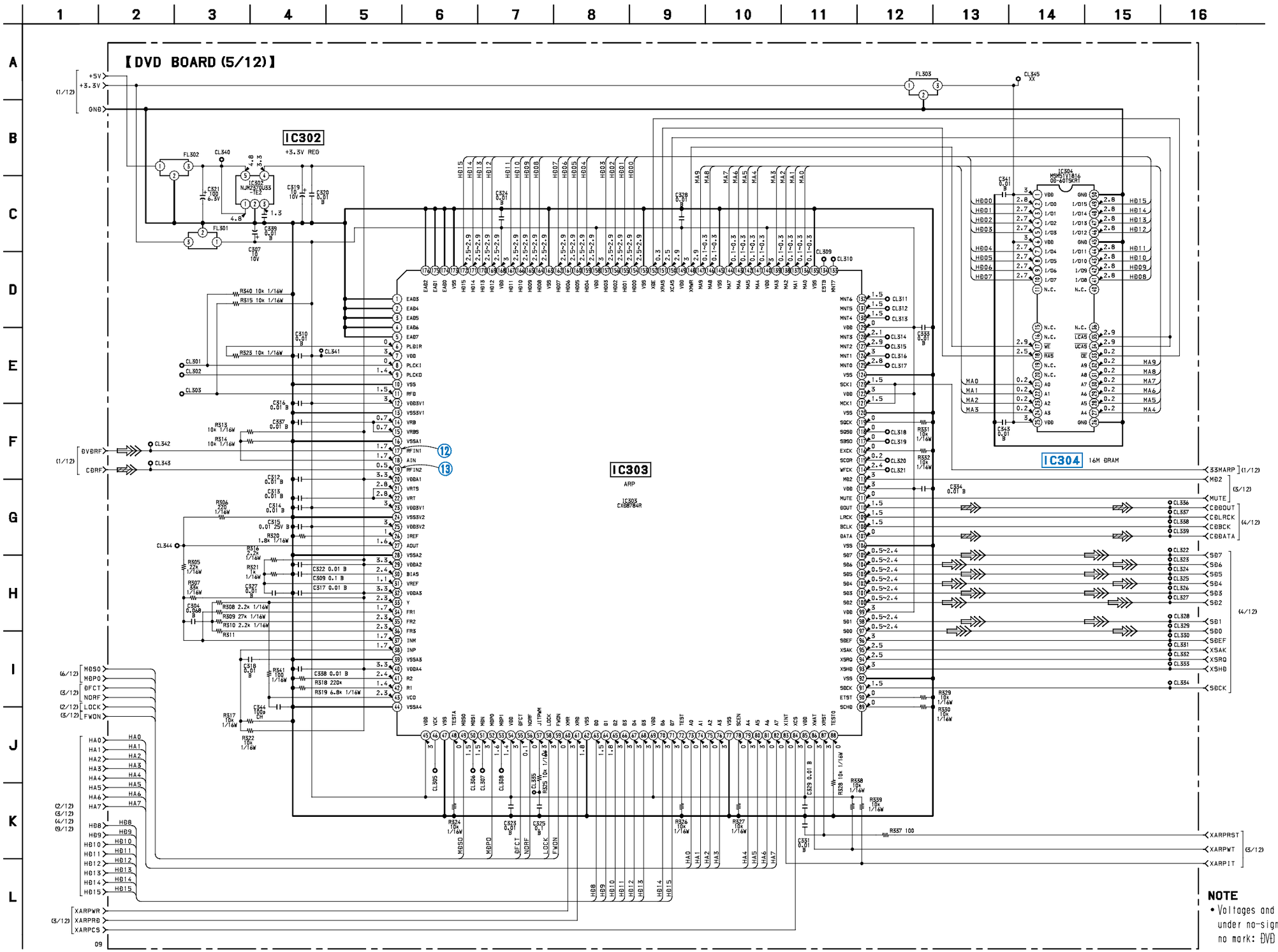
6-9. SCHEMATIC DIAGRAM – DVD (4/12) SECTION –

- See page 20 for Waveforms.
- See page 30 for Printed Wiring Board.
- See page 63, 64 for IC Block Diagrams.



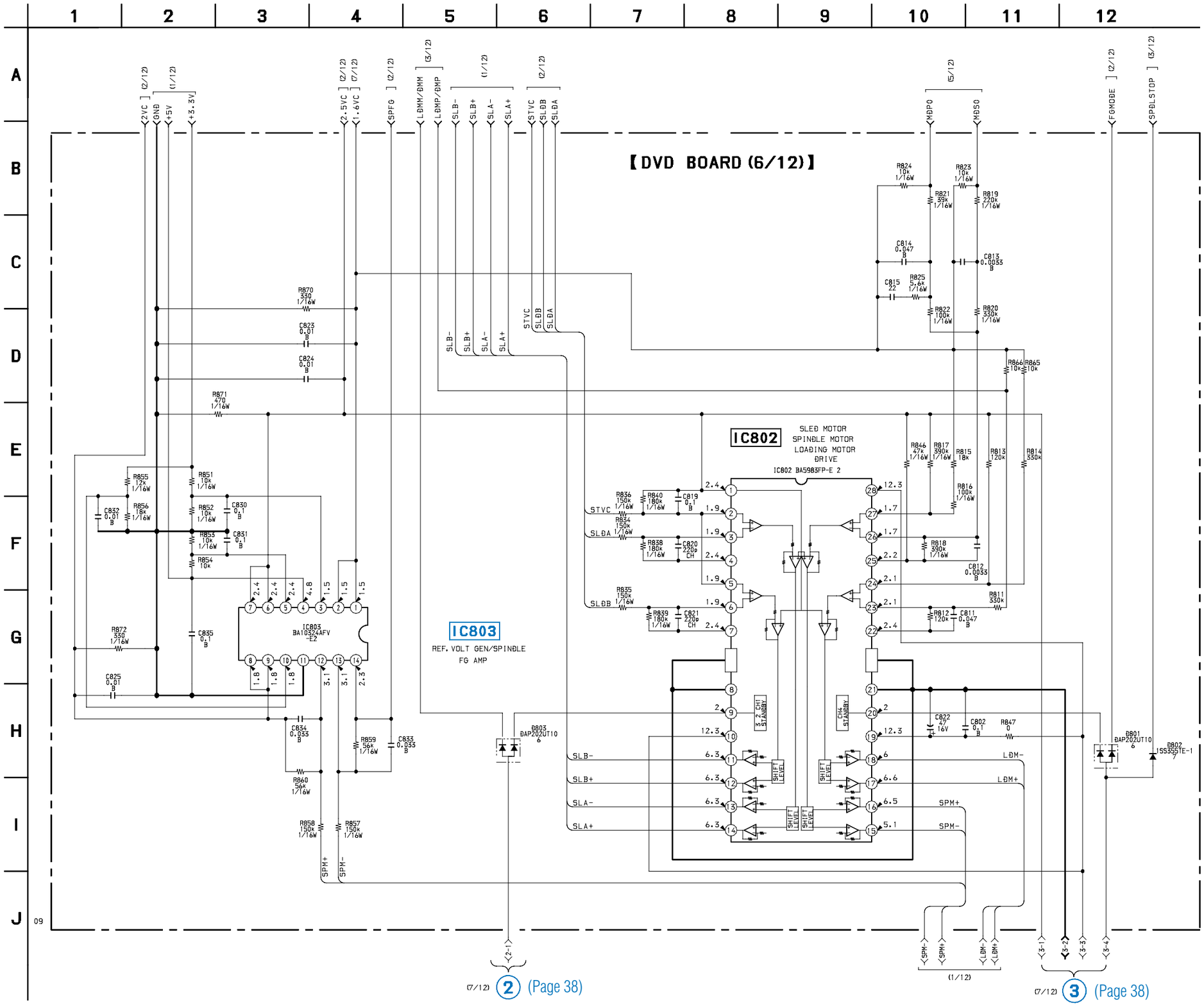
6-10. SCHEMATIC DIAGRAM – DVD (5/12) SECTION –

- **See page 20 for Waveforms.**
- **See page 30 for Printed Wiring Board.**
- **See page 64 for IC Block Diagrams.**



6-11. SCHEMATIC DIAGRAM – DVD (6/12) SECTION –

- **See page 20 for Waveforms.**
- **See page 30 for Printed Wiring Board.**
- **See page 65 for IC Block Diagrams.**

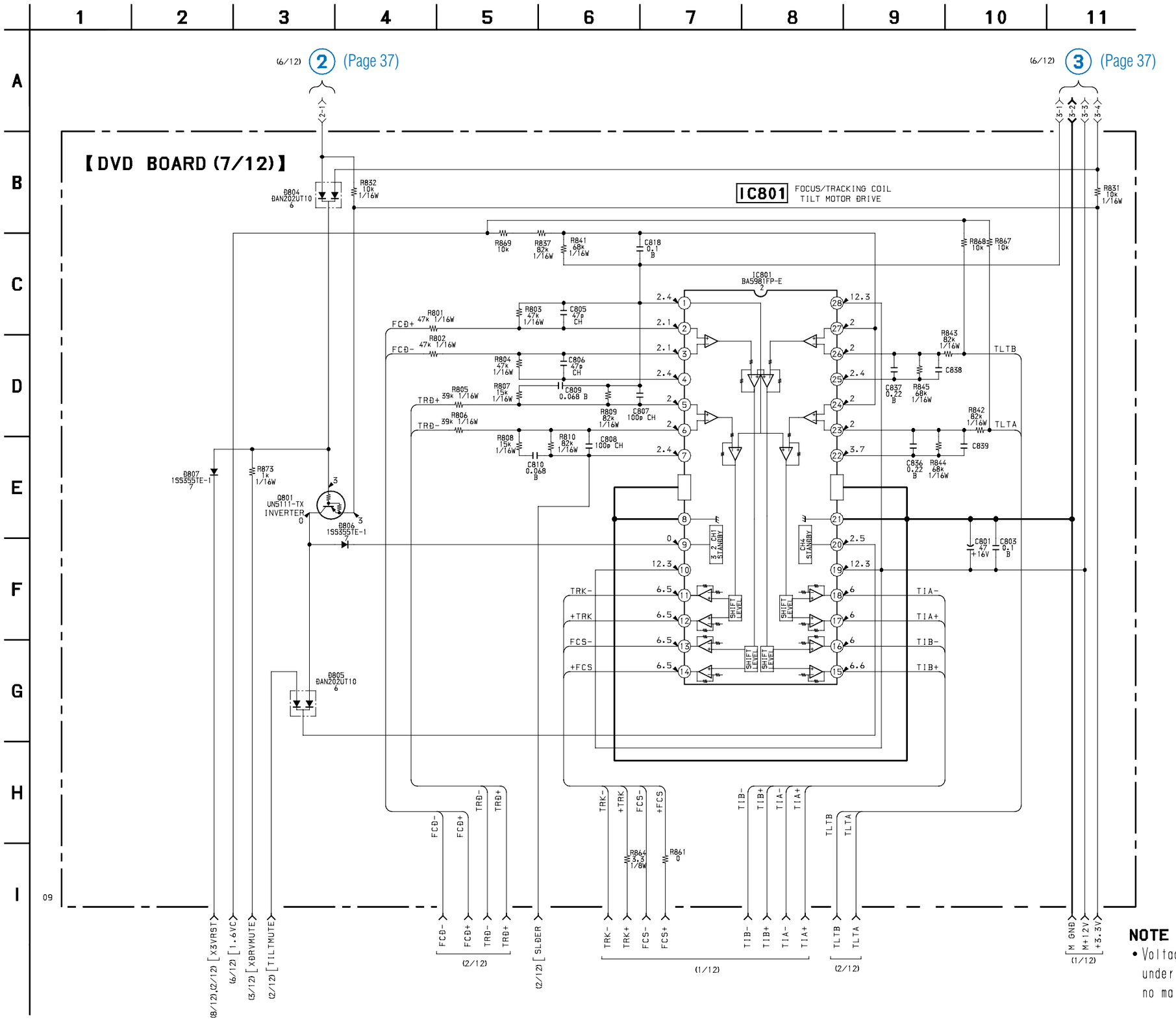


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

6-12. SCHEMATIC DIAGRAM – DVD (7/12) SECTION –

- **See page 20 for Waveforms.**
- **See page 30 for Printed Wiring Board.**

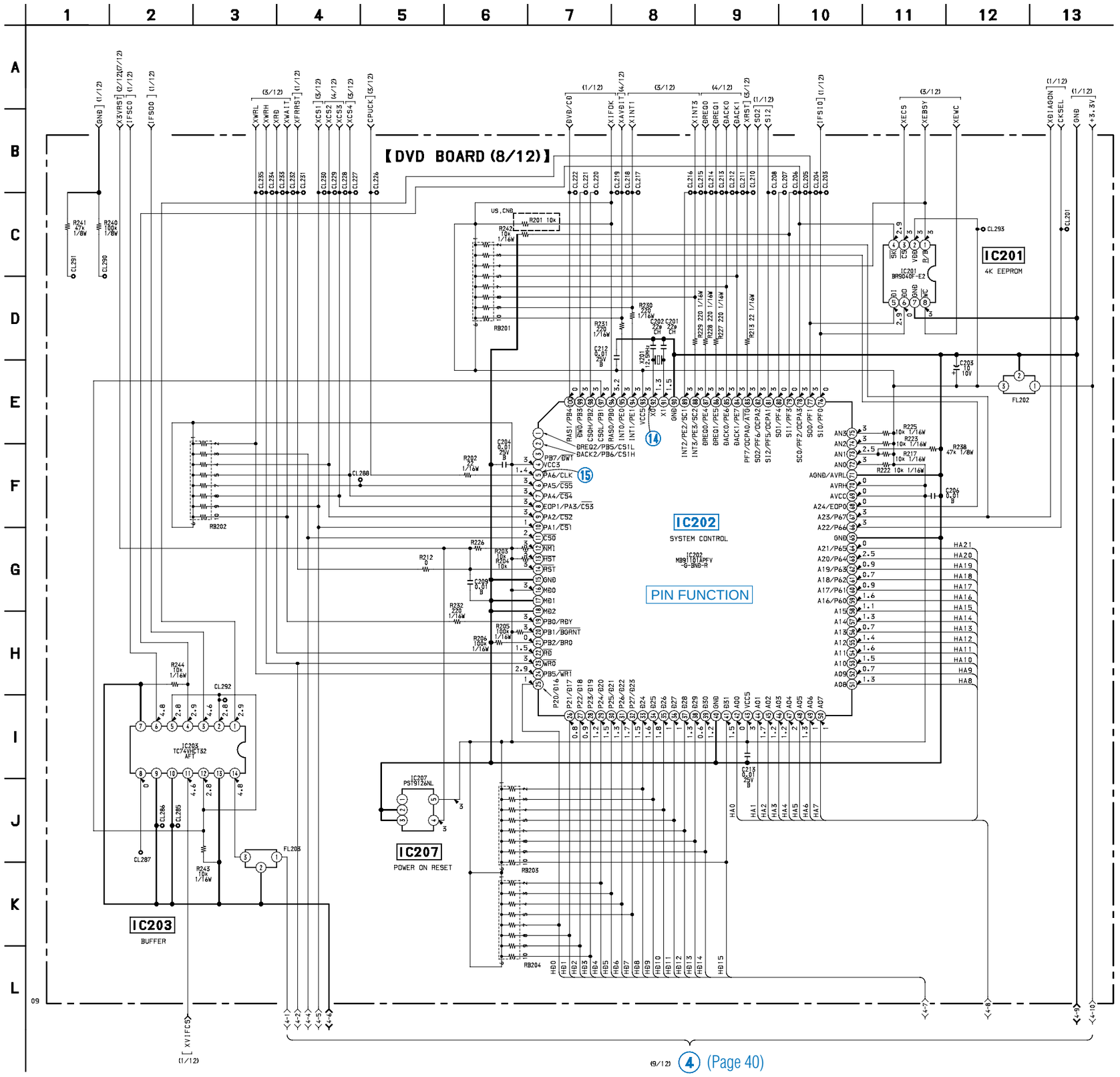


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: ĐVĐ

6-13. SCHEMATIC DIAGRAM – DVD (8/12) SECTION –

- See page 20 for Waveforms.
- See page 30 for Printed Wiring Board.
- See page 63 for IC Block Diagrams.
- See page 67 for IC Pin Functions.

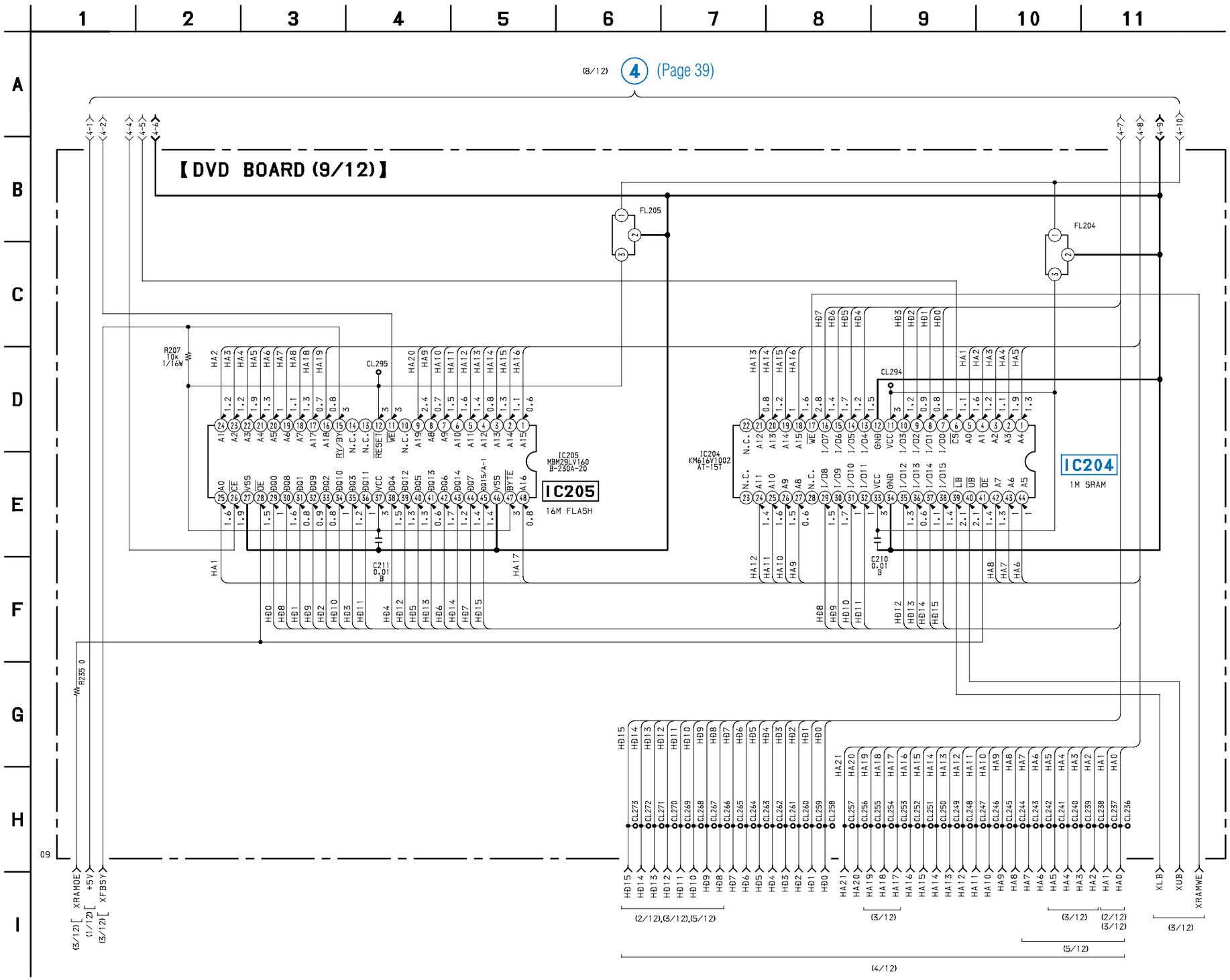


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

6-14. SCHEMATIC DIAGRAM – DVD (9/12) SECTION –

- See page 20 for Waveforms.
- See page 30, 31 for Printed Wiring Board.
- See page 64 for IC Block Diagrams.

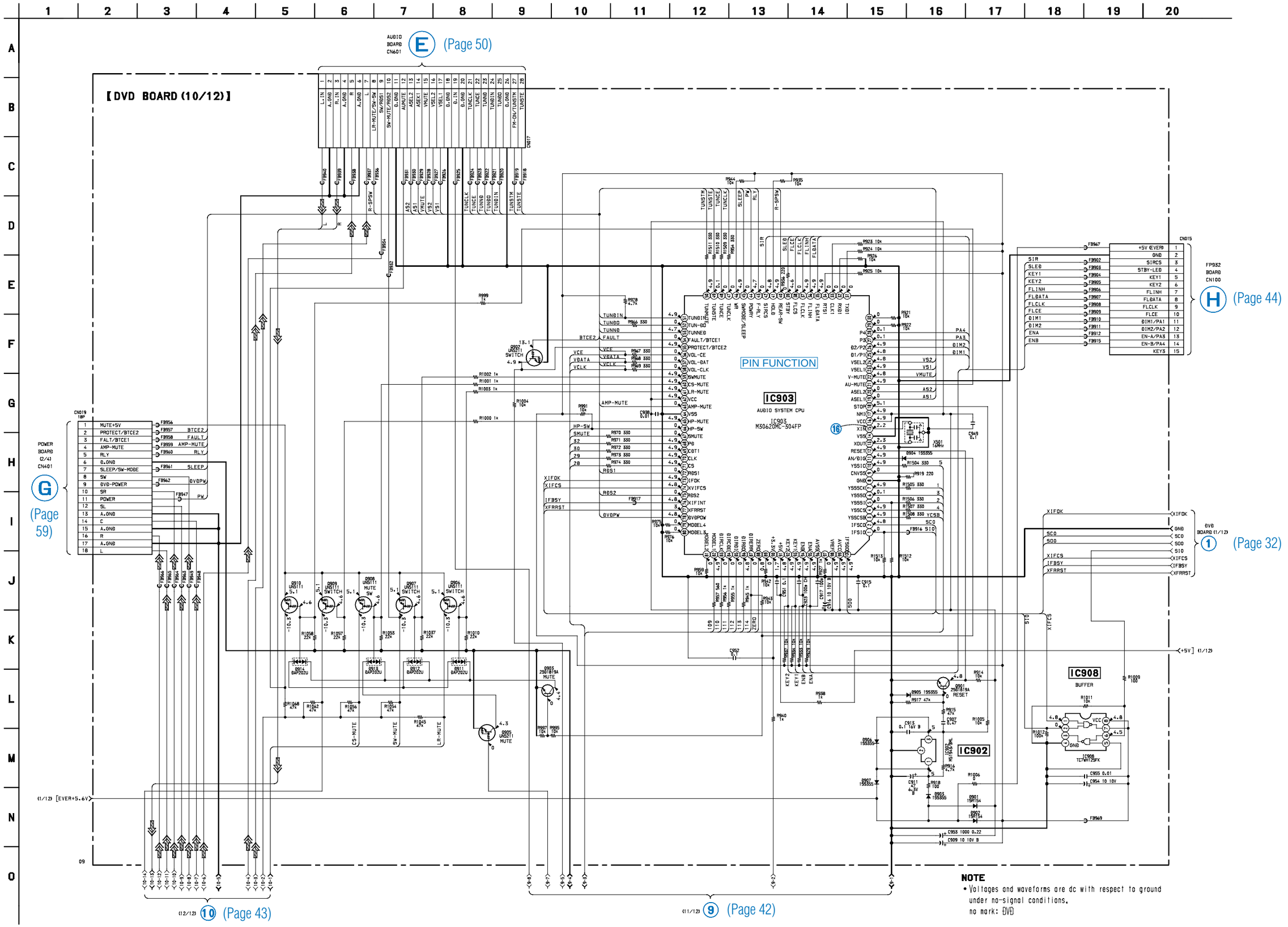


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

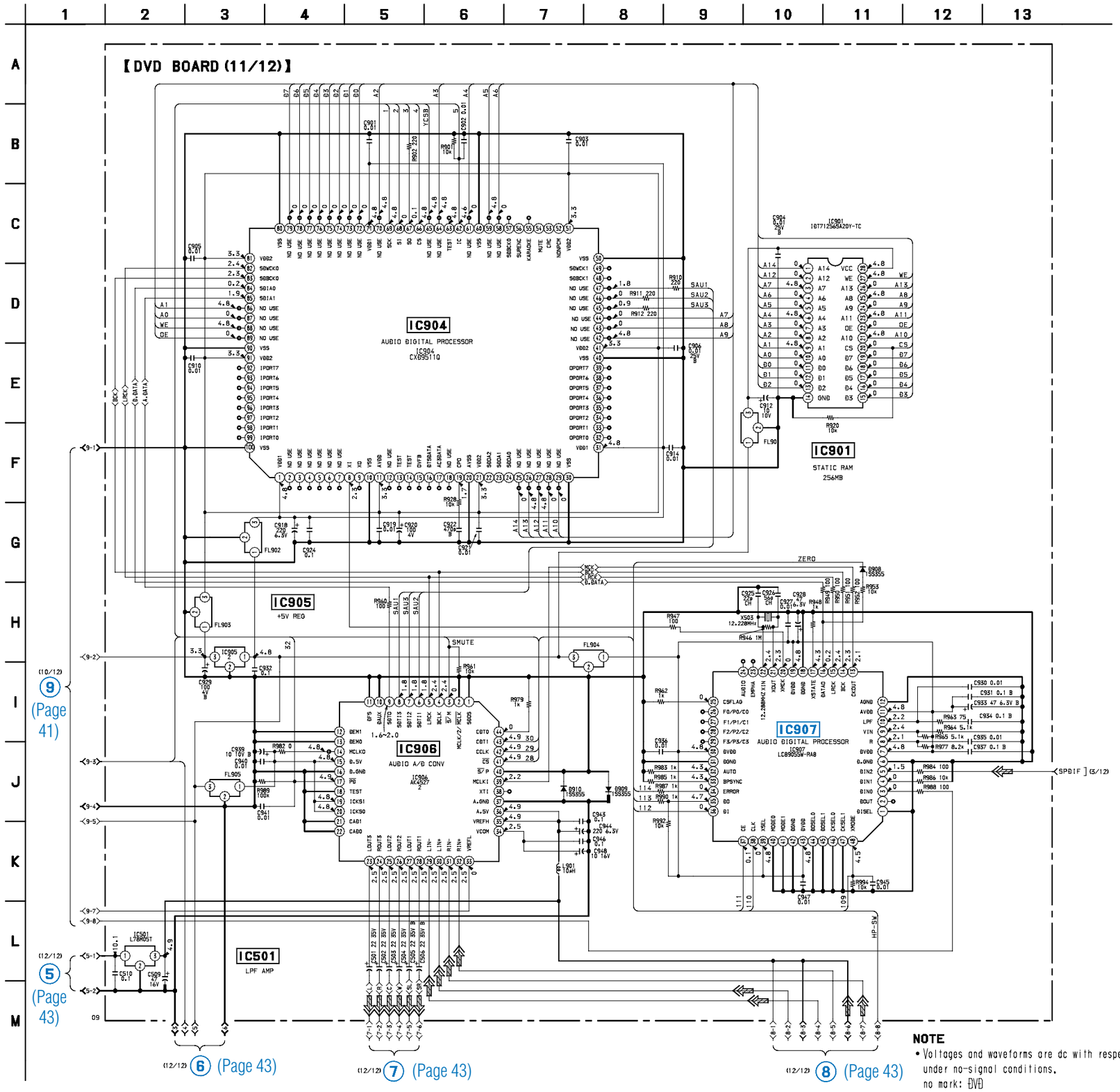
6-15. SCHEMATIC DIAGRAM – DVD (10/12) SECTION –

- See page 20 for Waveforms.
- See page 30 for Printed Wiring Board.
- See page 69 for IC Pin Functions.



6-16. SCHEMATIC DIAGRAM – DVD (11/12) SECTION –

- See page 20 for Waveforms.
- See page 30, 31 for Printed Wiring Board.
- See page 66 for IC Block Diagrams.

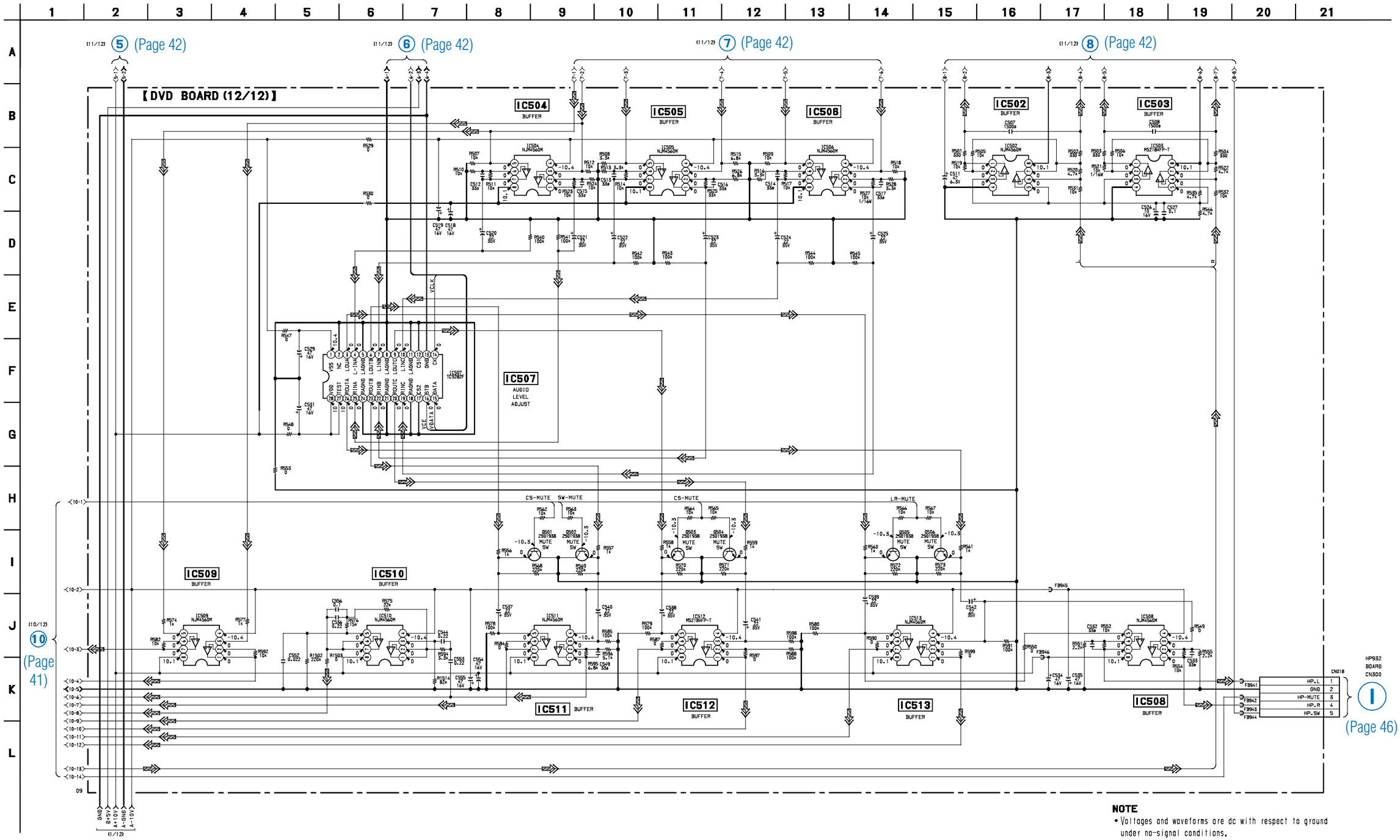


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: DVD

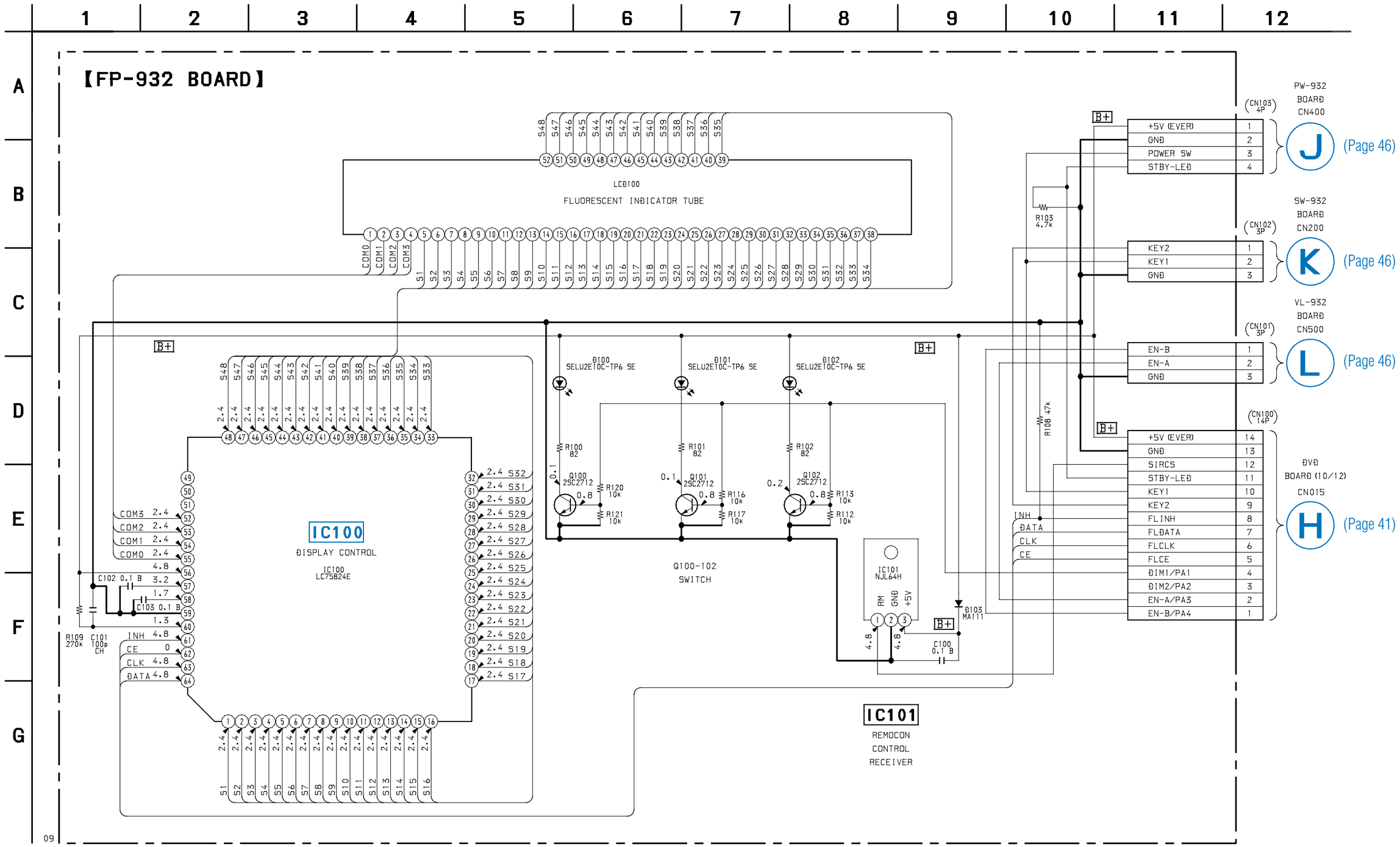
6-17. SCHEMATIC DIAGRAM – DVD (12/12) SECTION –

- See page 20 for Waveforms.
- See page 31 for Printed Wiring Board.



6-18. SCHEMATIC DIAGRAM – FRONT (1/2) SECTION –

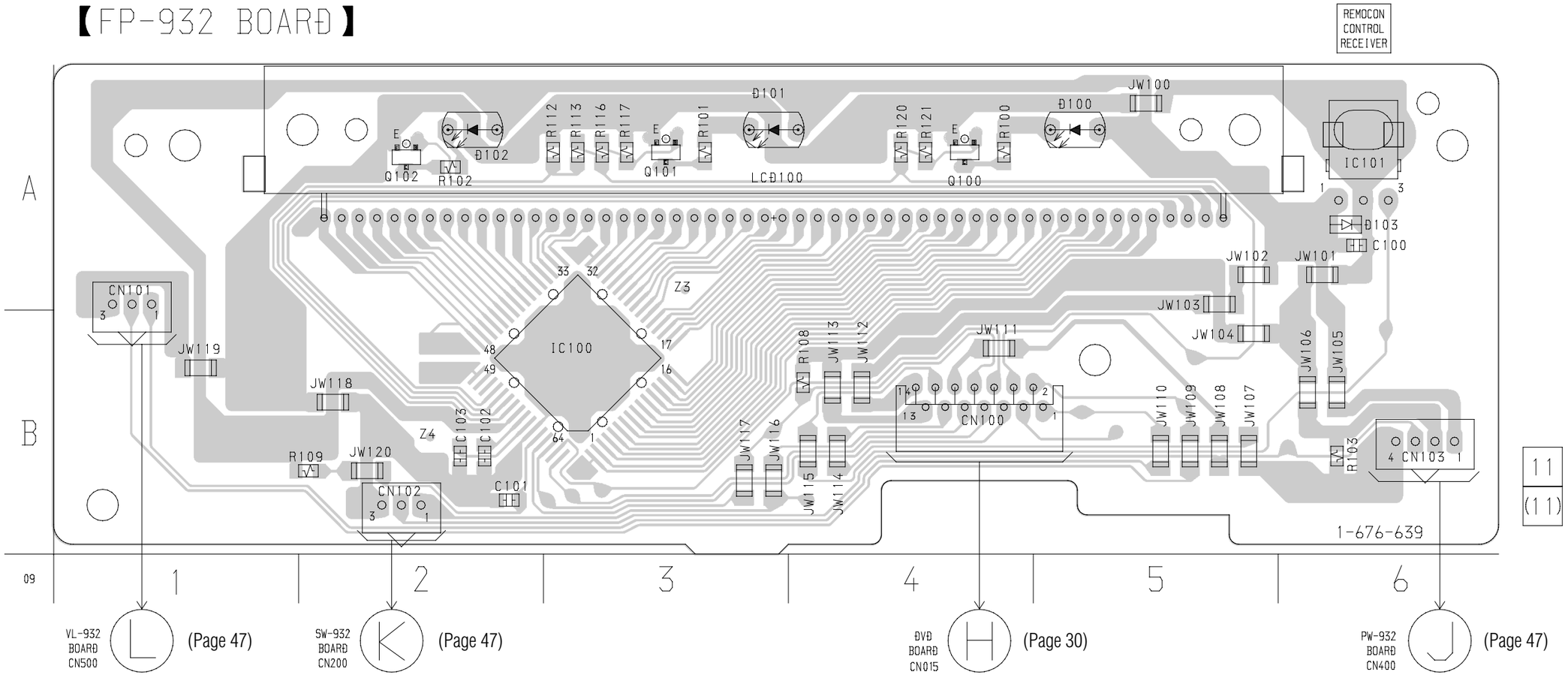
- See page 20 for Waveforms.
- See page 66 for IC Block Diagrams.



NOTE

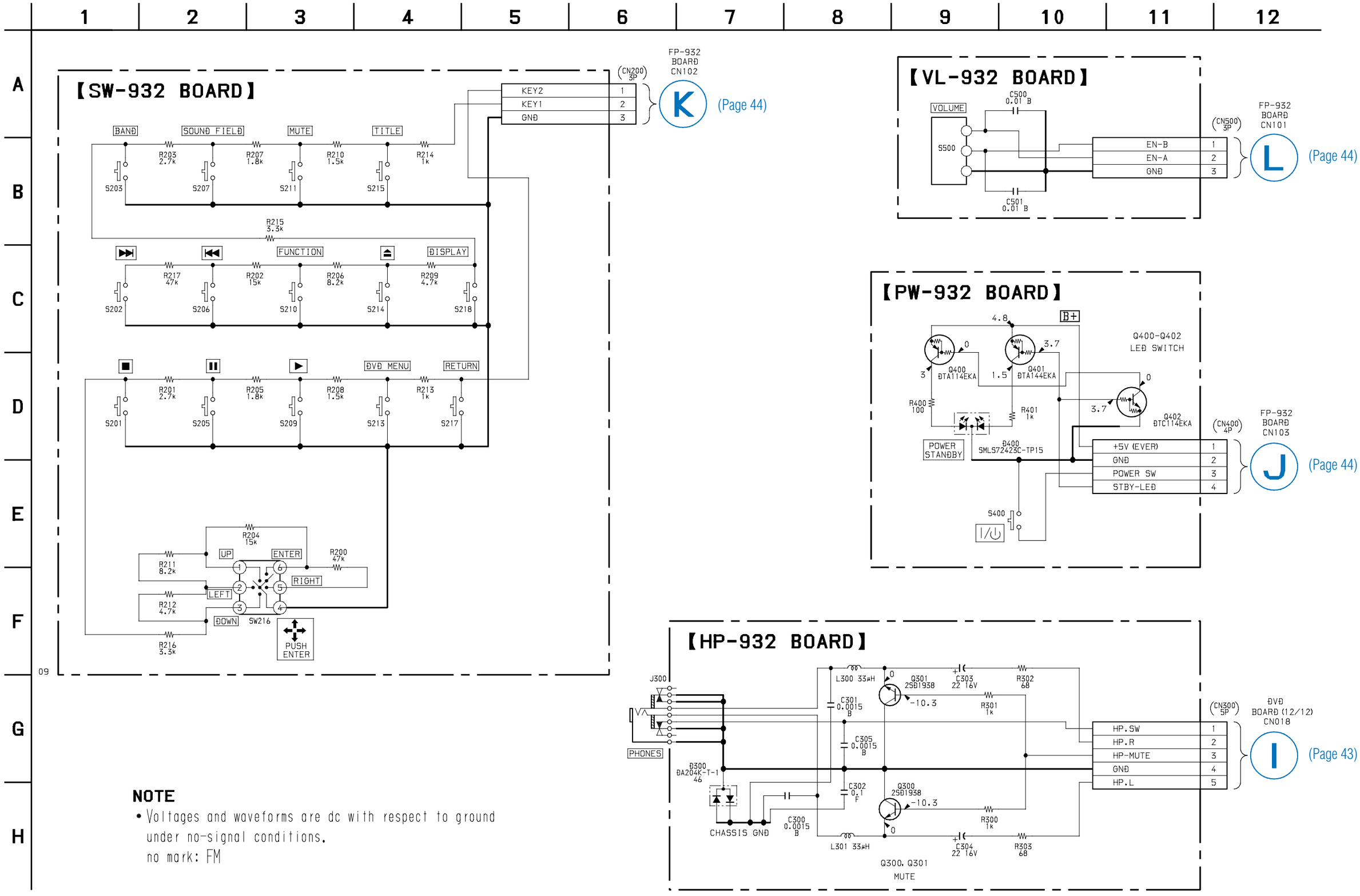
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

6-19. PRINTED WIRING BOARD – FRONT (1/2) SECTION –
• See page 19 for Circuit Boards Location.



6-20. SCHEMATIC DIAGRAM – FRONT (2/2) SECTION –

• See page 20 for Waveforms.

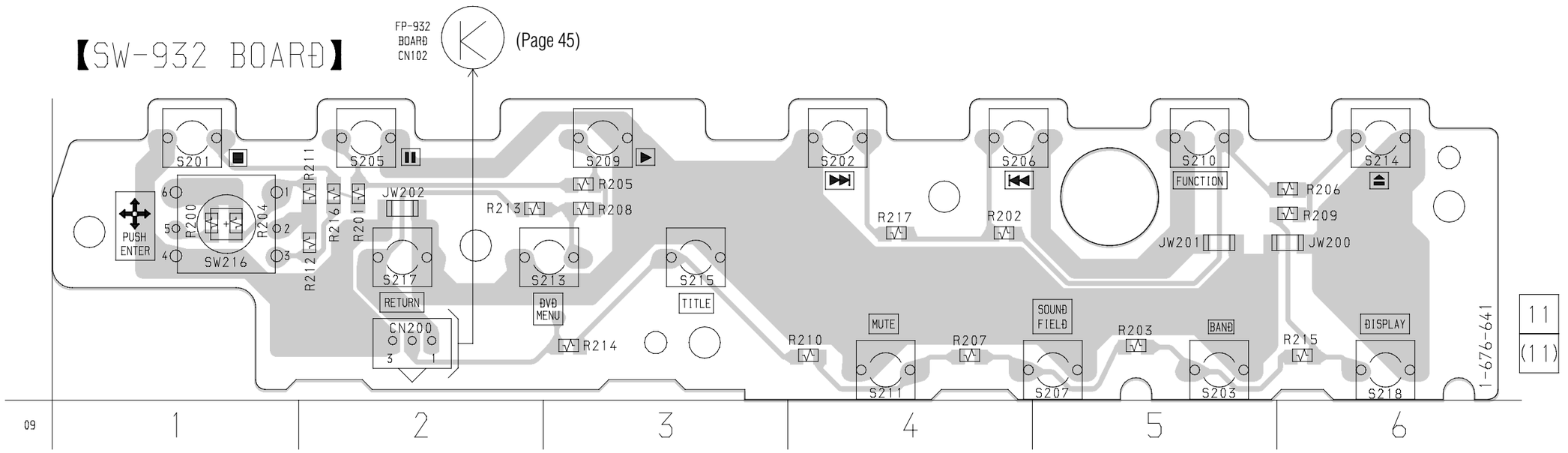


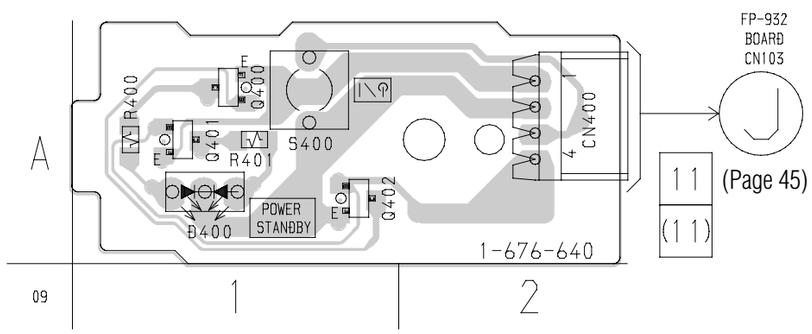
NOTE

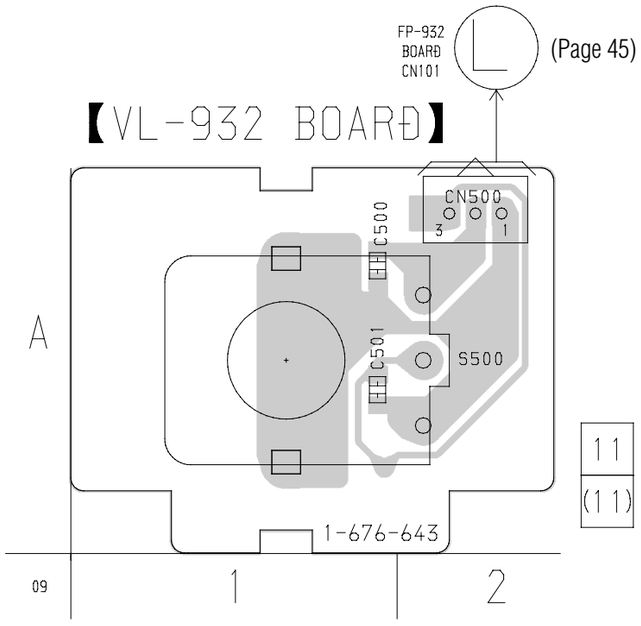
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

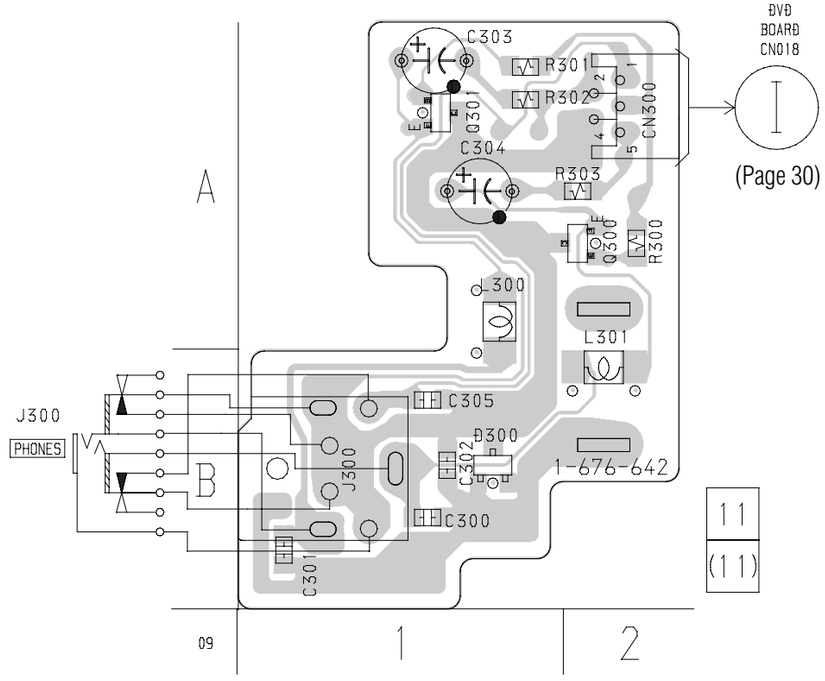
6-21. PRINTED WIRING BOARD – FRONT (2/2) SECTION –

• See page 19 for Circuit Boards Location.



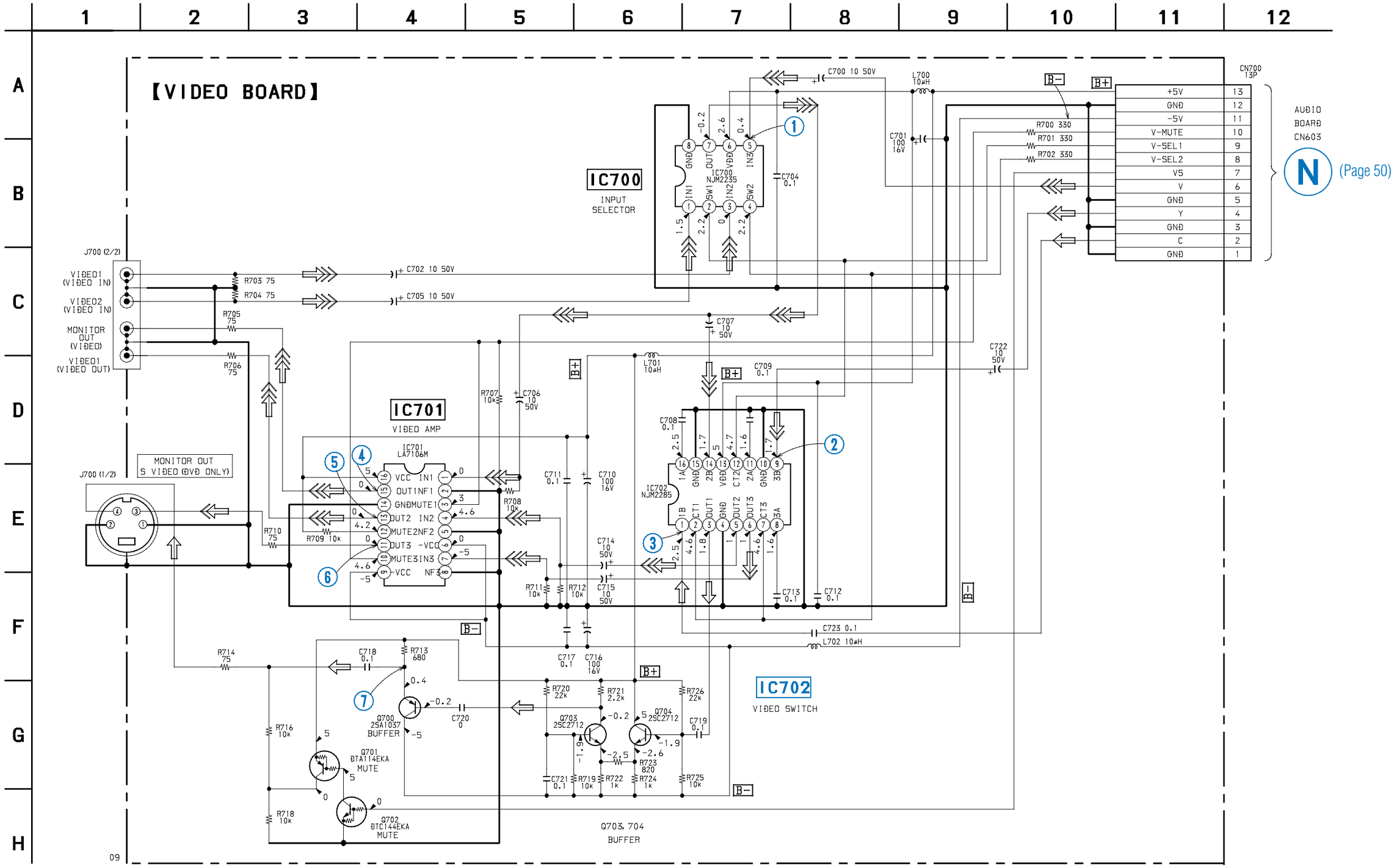






6-22. SCHEMATIC DIAGRAM – VIDEO SECTION –

- See page 20 for Waveforms.
- See page 66 for IC Block Diagrams.



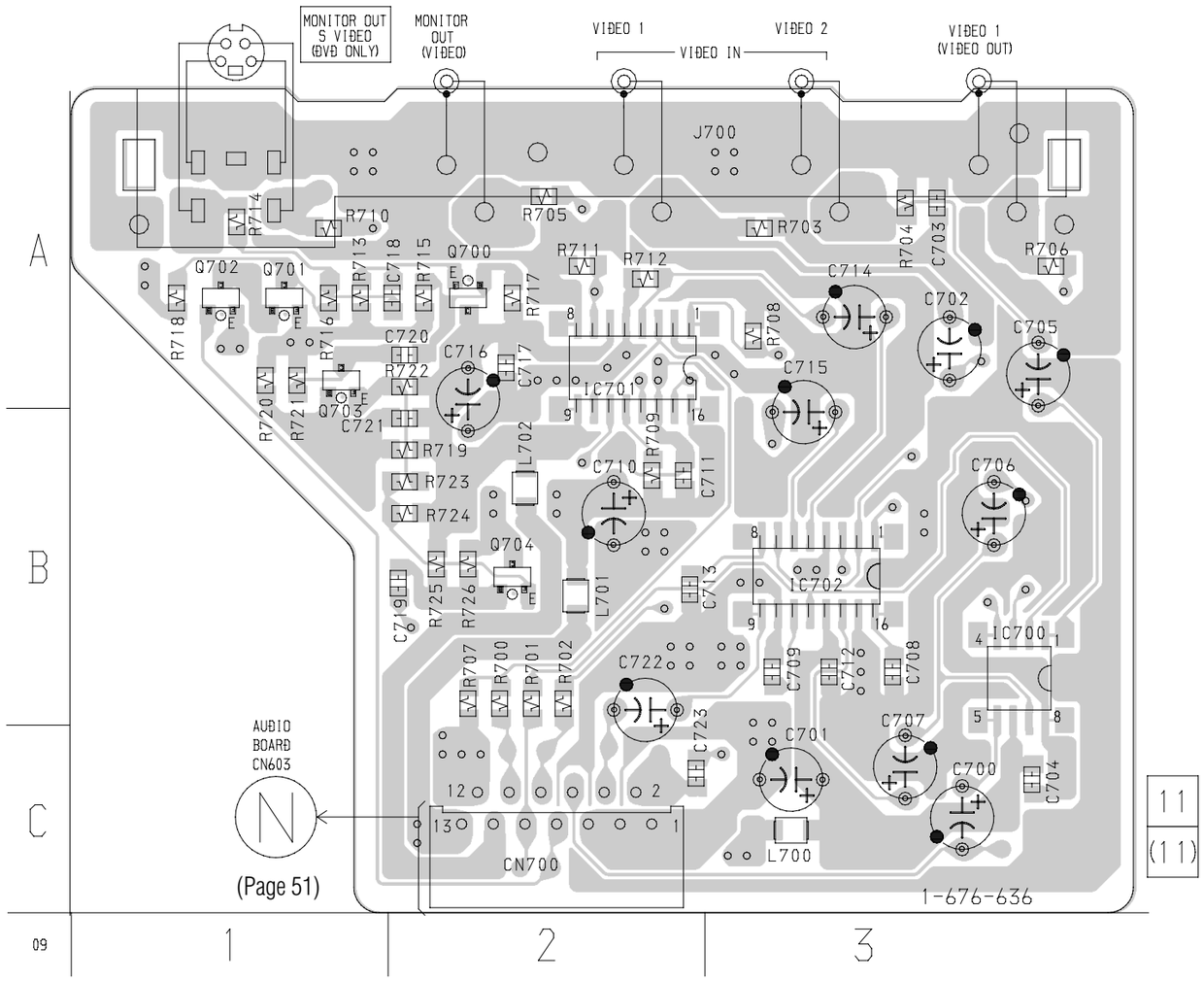
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

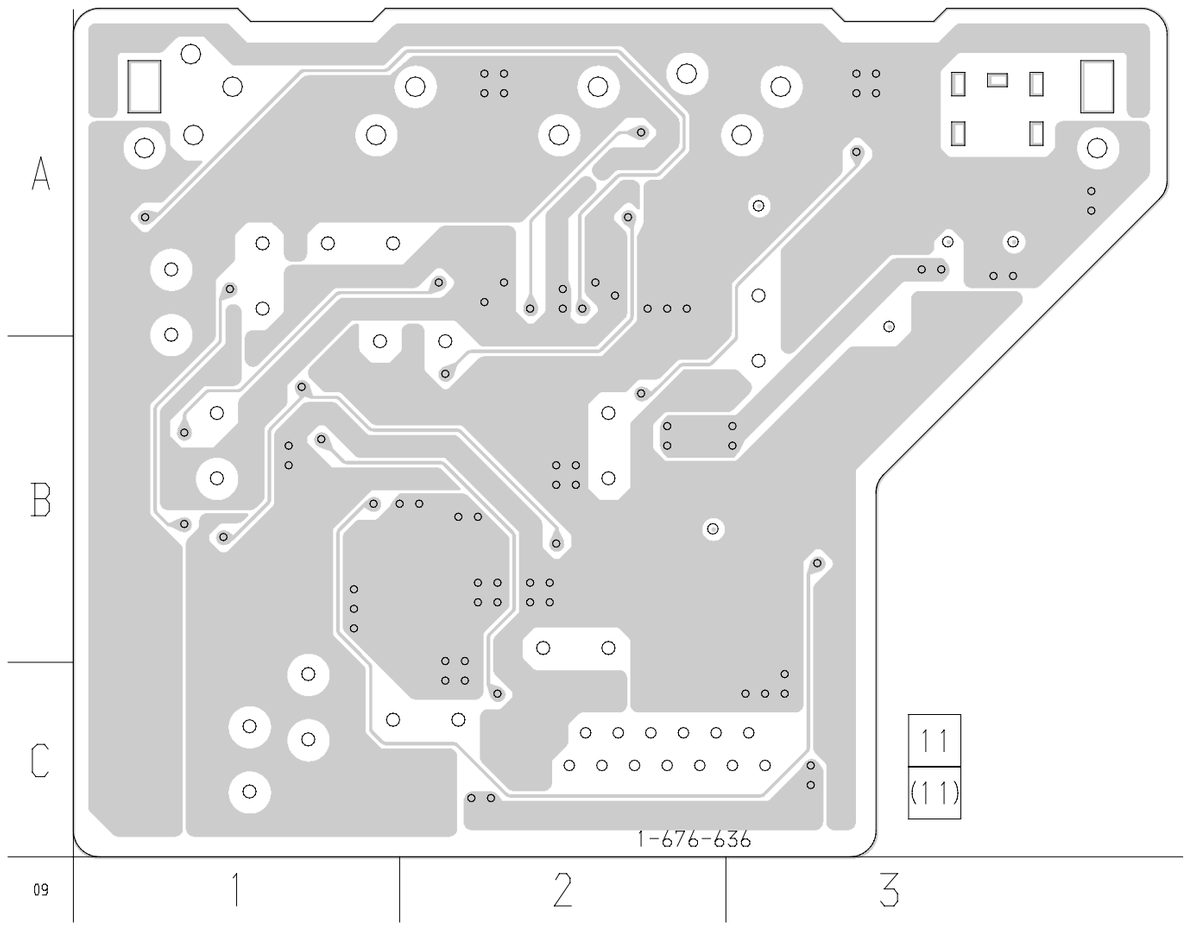
6-23. PRINTED WIRING BOARD – VIDEO SECTION –

• See page 19 for Circuit Boards Location.

【VIÐEO BOARÐ】(SIÐE A)



【VIÐEO BOARÐ】 (SIÐE B)

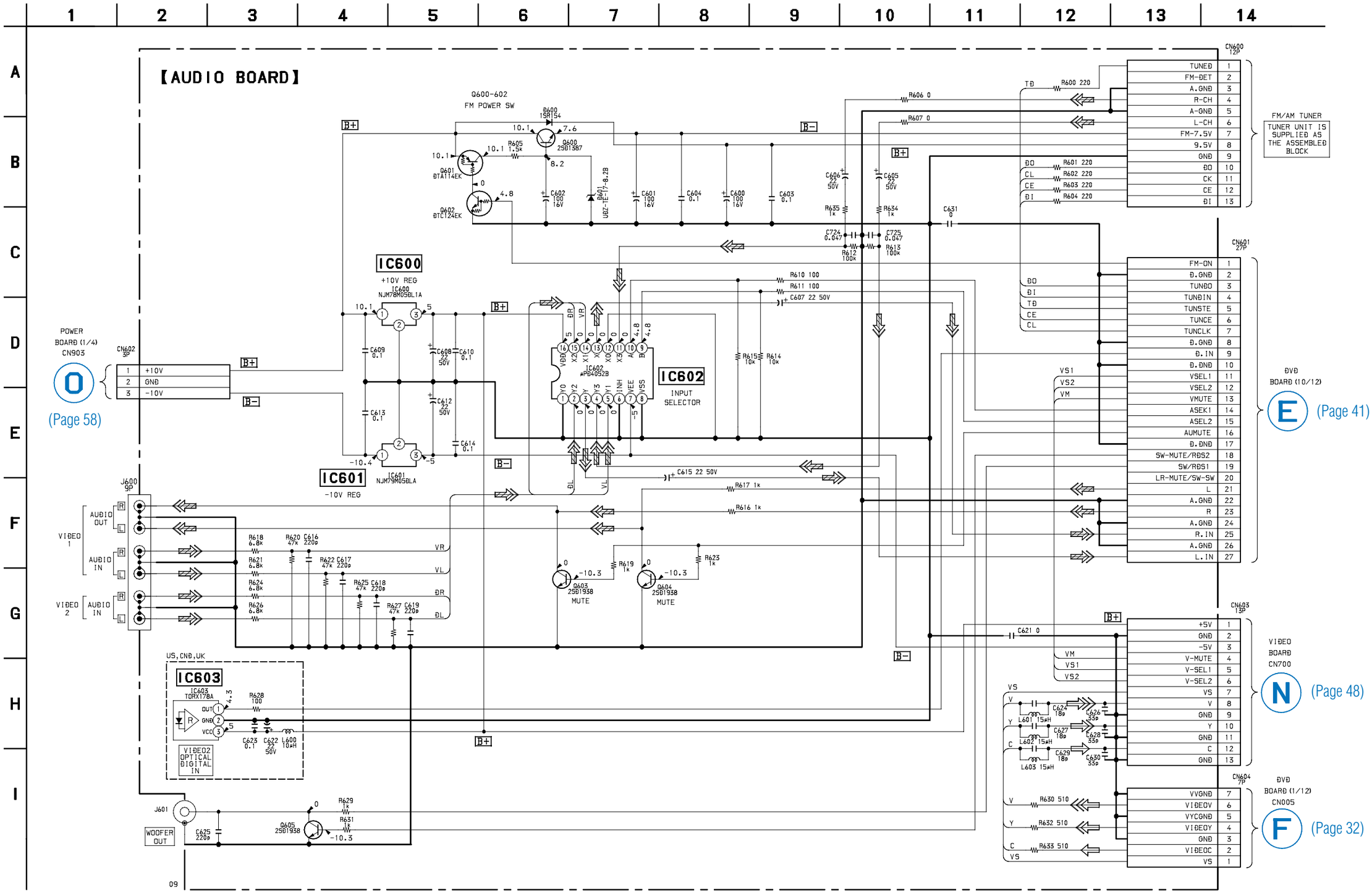


• **Semiconductor Location**

Ref. No.	Location
IC700	B-3
IC701	A-2
IC702	B-3
Q700	A-2
Q701	A-1
Q702	A-1
Q703	A-1
Q704	B-2

6-24. SCHEMATIC DIAGRAM – AUDIO SECTION –

• See page 20 for Waveforms.



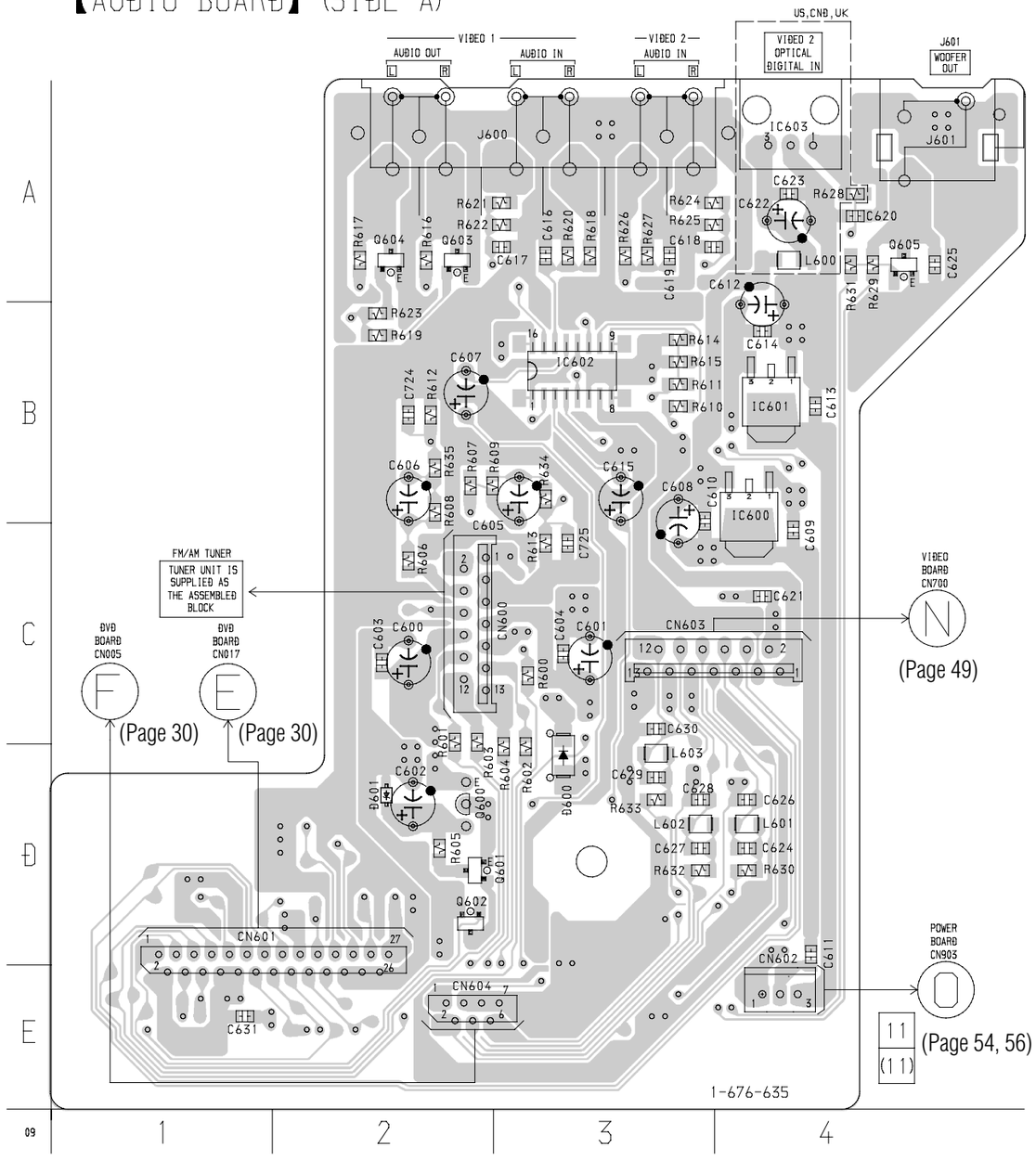
NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: FM

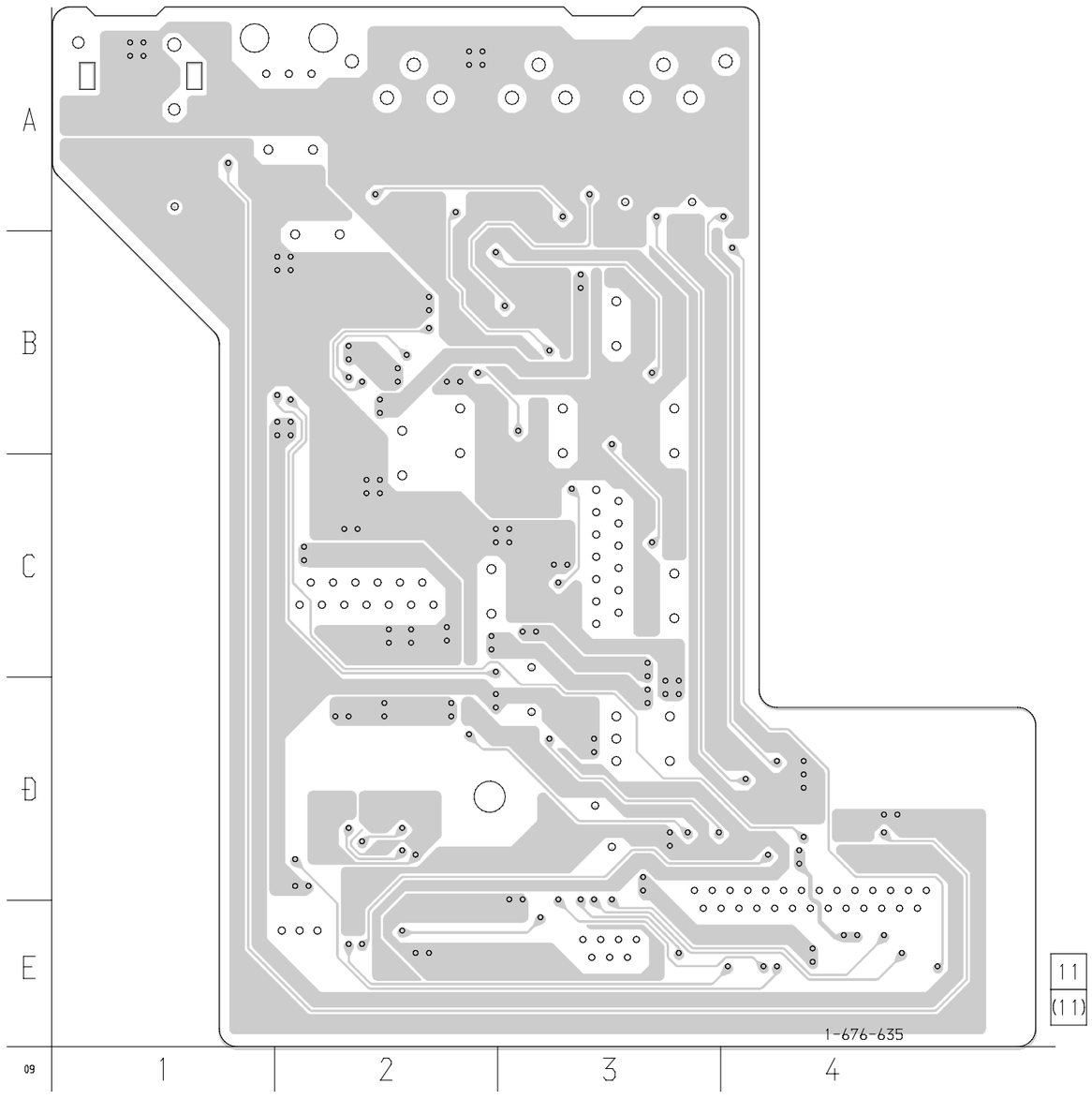
6-25. PRINTED WIRING BOARD – AUDIO SECTION –

• See page 19 for Circuit Boards Location.

【AUDIO BOARD】(SIDE A)



【AUDIO BOARD】(SIDE B)

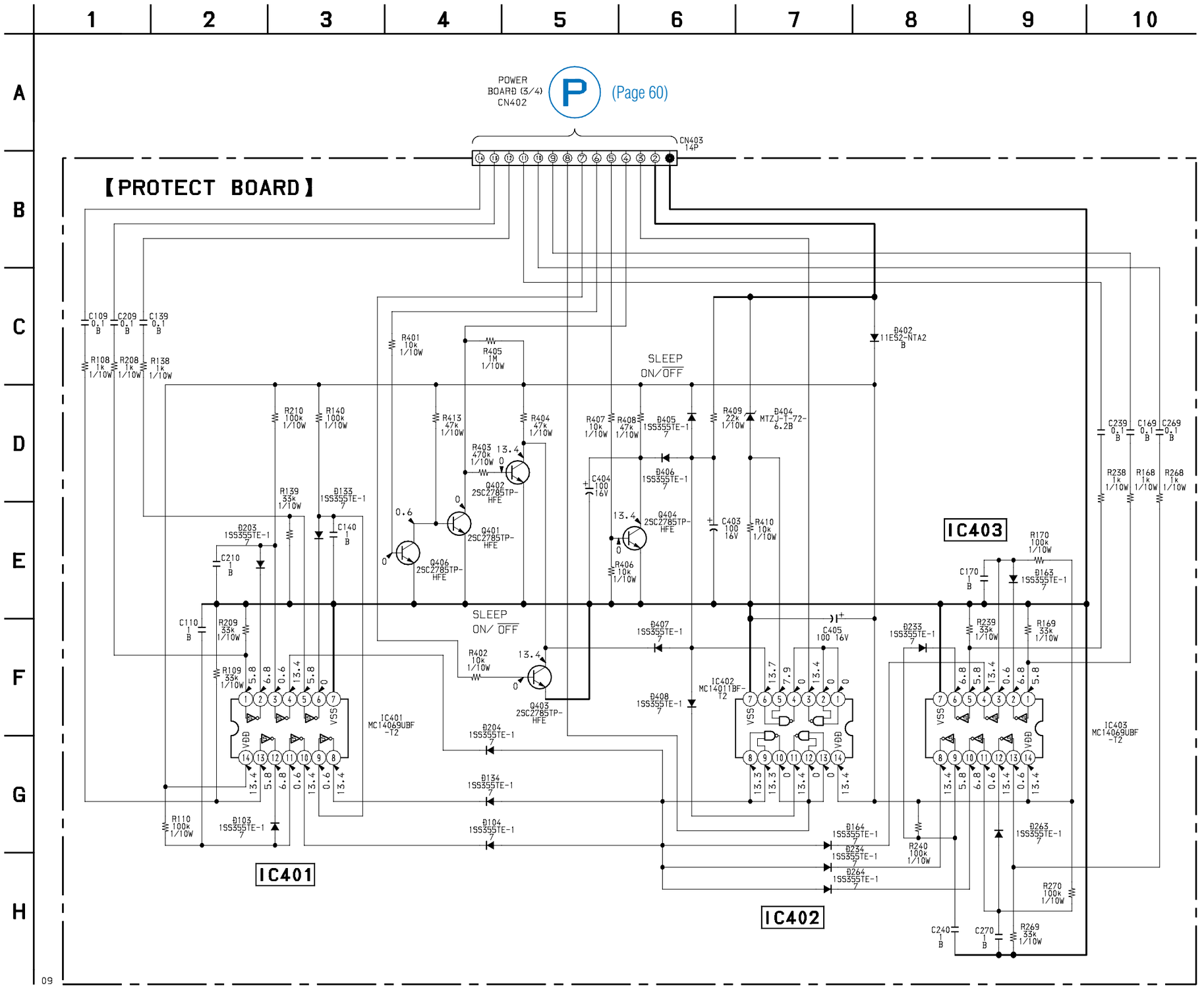


• **Semiconductor Location**

Ref. No.	Location
D600	D-3
D601	D-2
IC600	B-4
IC601	B-4
IC602	B-3
IC603	A-4
Q600	D-2
Q601	D-2
Q602	D-2
Q603	A-2
Q604	A-2
Q605	A-4

6-26. SCHEMATIC DIAGRAM – PROTECT SECTION –

• See page 20 for Waveforms.



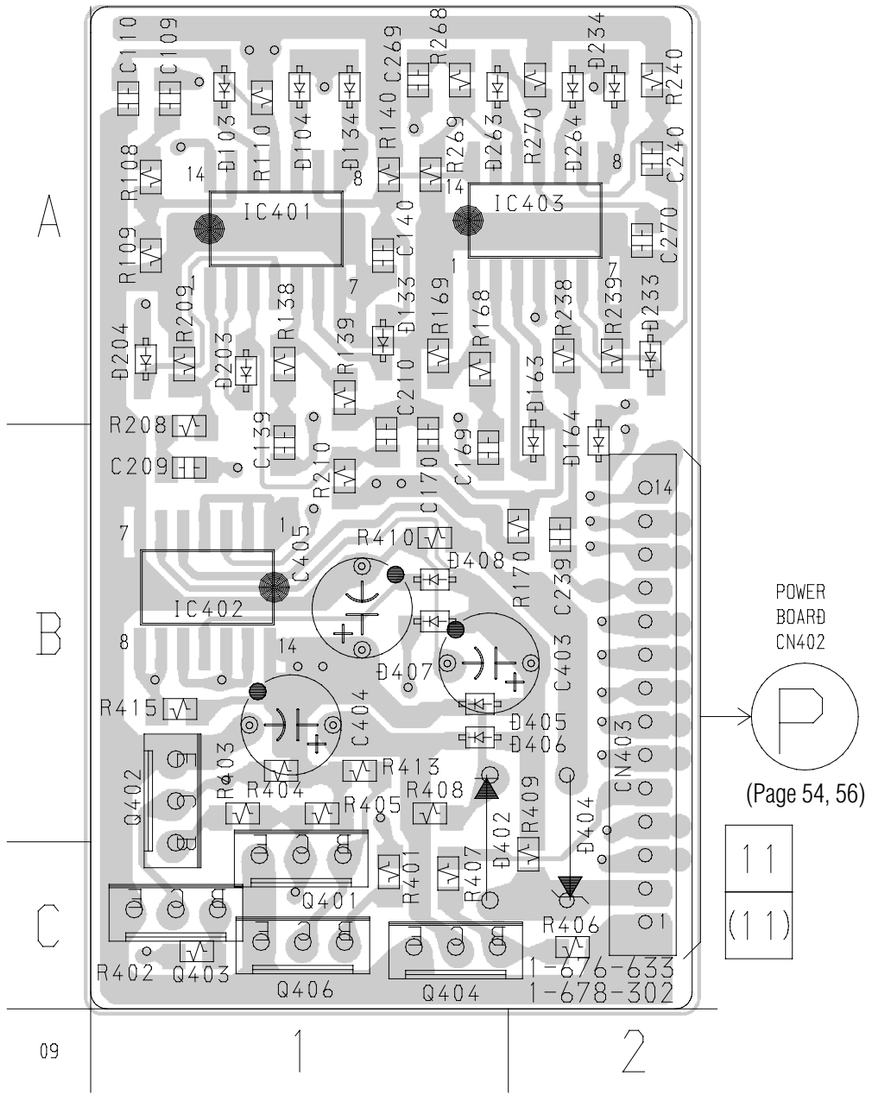
NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: FM

6-27. PRINTED WIRING BOARD – PROTECT SECTION –

• See page 19 for Circuit Boards Location.

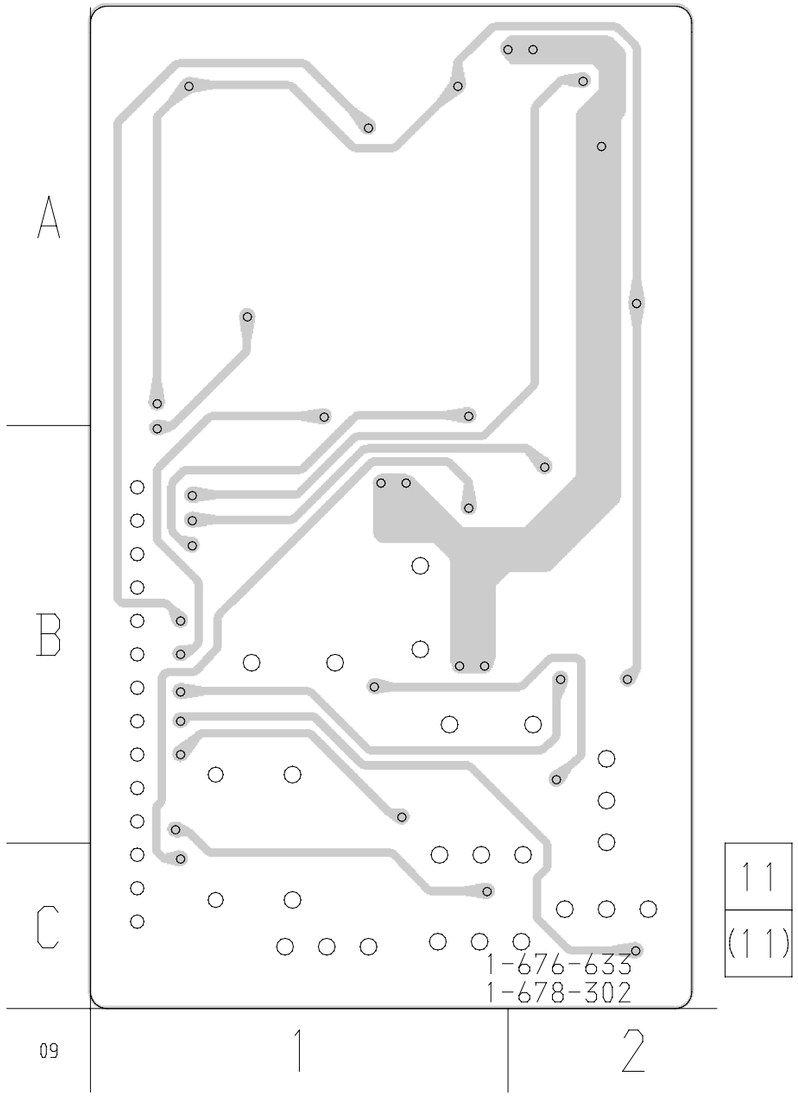
【PROTECT BOARD】(SIDE A)



• Semiconductor Location

Ref. No.	Location
D103	A-1
D104	A-1
D133	A-1
D134	A-1
D163	B-2
D164	B-2
D203	A-1
D204	A-1
D233	A-2
D234	A-2
D263	A-1
D264	A-2
D402	B-1
D405	B-1
D406	B-1
D407	B-1
D408	B-1
IC401	A-1
IC402	B-1
IC403	A-2
Q401	C-1
Q402	B-1
Q403	C-1
Q404	C-1
Q406	C-1

【PROTECT BOARD】(SIDE B)

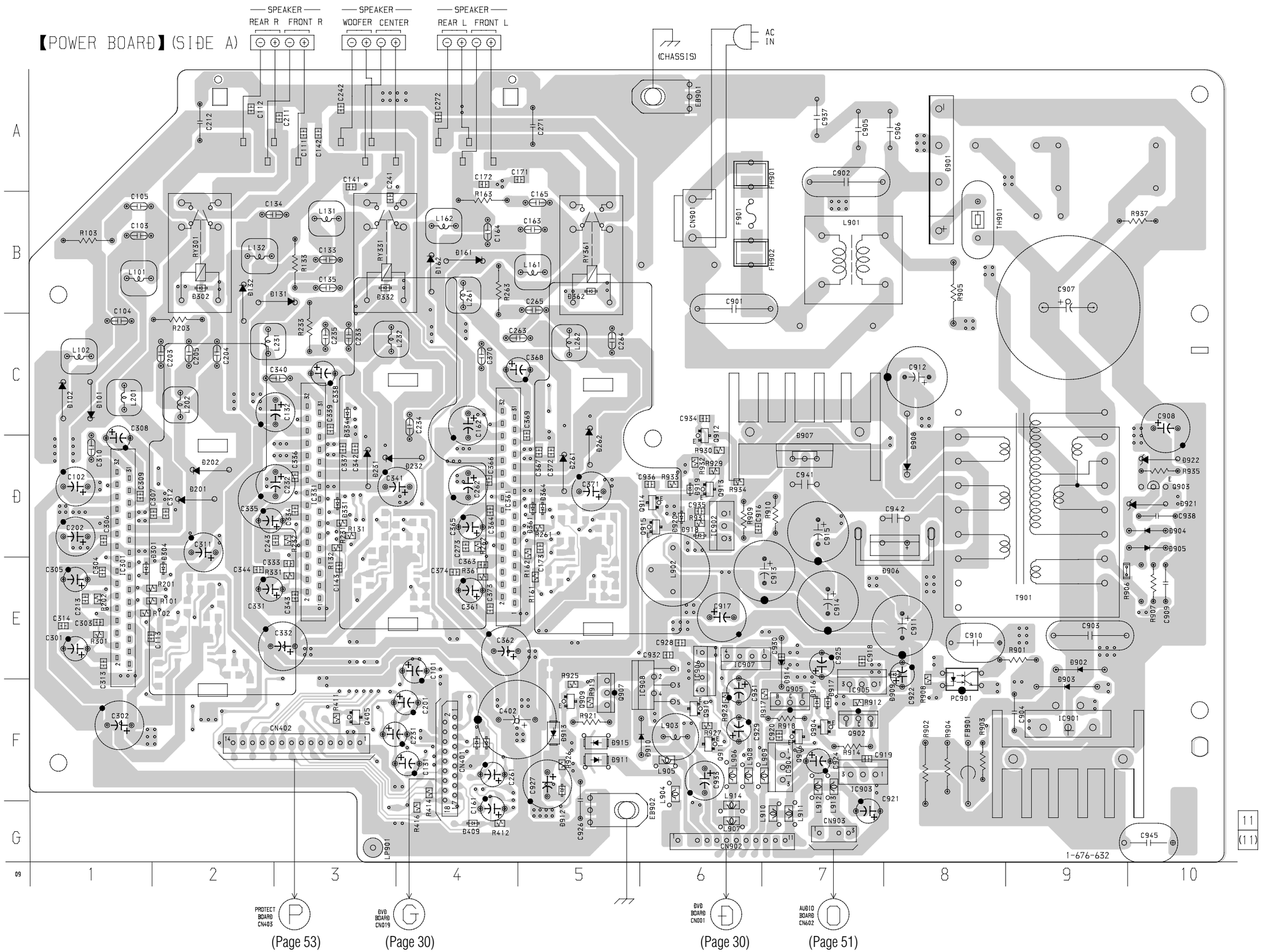


6-28. PRINTED WIRING BOARD – POWER (US,CND ONLY) SECTION –

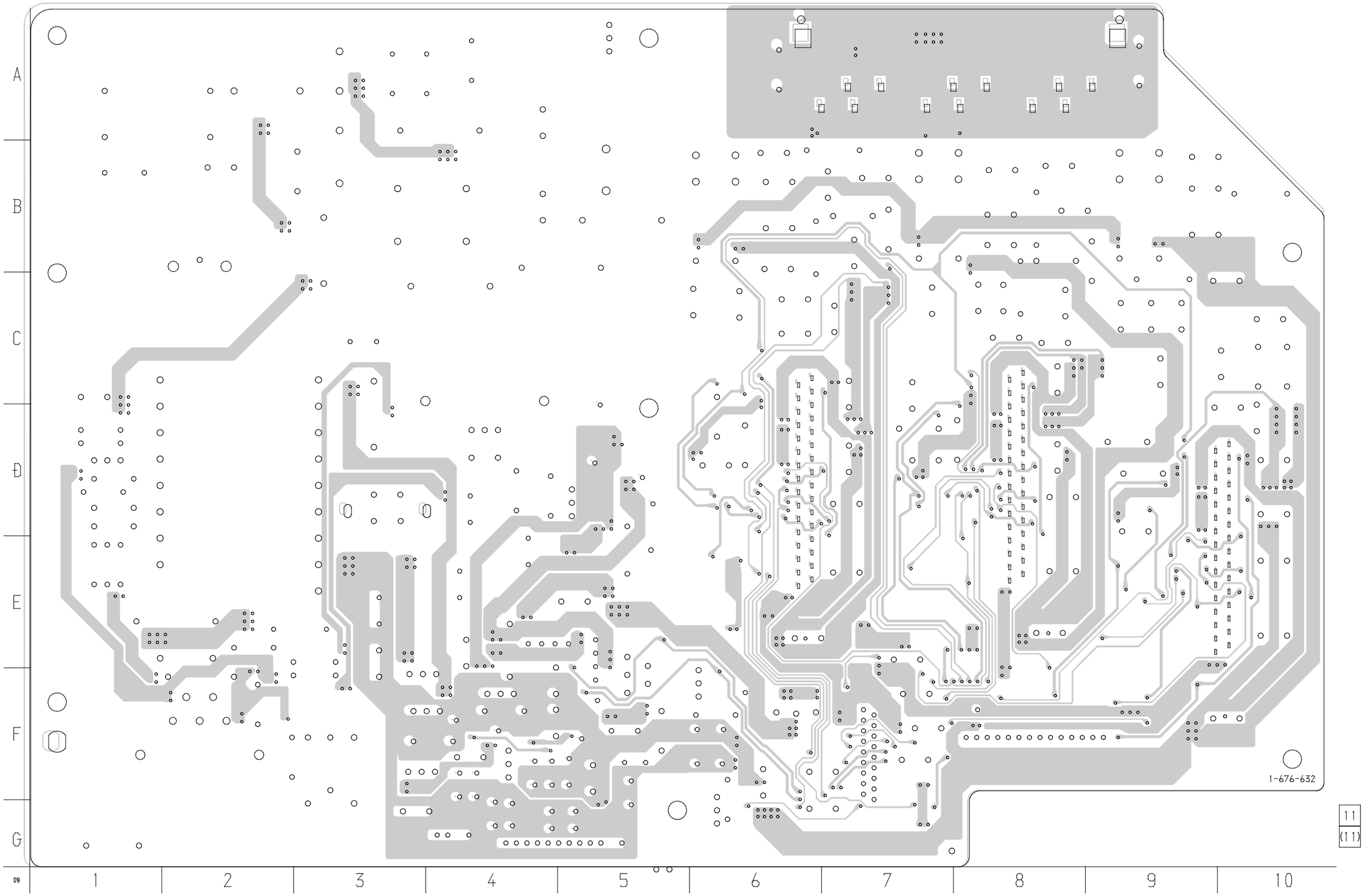
• See page 19 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D101	C-1
D102	C-1
D131	B-2
D132	B-2
D161	B-4
D162	B-4
D201	D-2
D202	D-2
D231	D-3
D232	D-3
D261	D-5
D262	D-5
D301	E-1
D302	B-2
D304	E-2
D331	D-3
D332	B-3
D334	C-3
D361	D-5
D362	B-5
D364	D-5
D409	G-4
D901	A-1
D902	E-9
D903	F-9
D904	D10
D905	D-10
D906	E-8
D907	D-7
D908	D-8
D909	E-8
D910	F-5
D911	F-5
D912	F-5
D913	F-5
D914	E-7
D915	F-5
D916	F-7
D917	F-7
D918	D-6
D919	D-6
D920	D-6
D921	D-10
D922	D-10
IC301	E-1
IC331	D-3
IC361	D-4
IC901	F-9
IC902	D-6
IC903	F-7
IC904	F-7
IC905	E-7
IC906	D-6
IC907	E-6
IC908	E-6
Q405	F-3
Q902	F-7
Q903	D-10
Q904	F-7
Q905	F-7
Q906	F-7
Q907	F-5
Q909	F-5
Q910	F-6
Q911	F-6
Q912	C-6
Q913	D-6
Q914	D-6
Q915	D-6



【POWER BOARÐ】(SIÐE B)

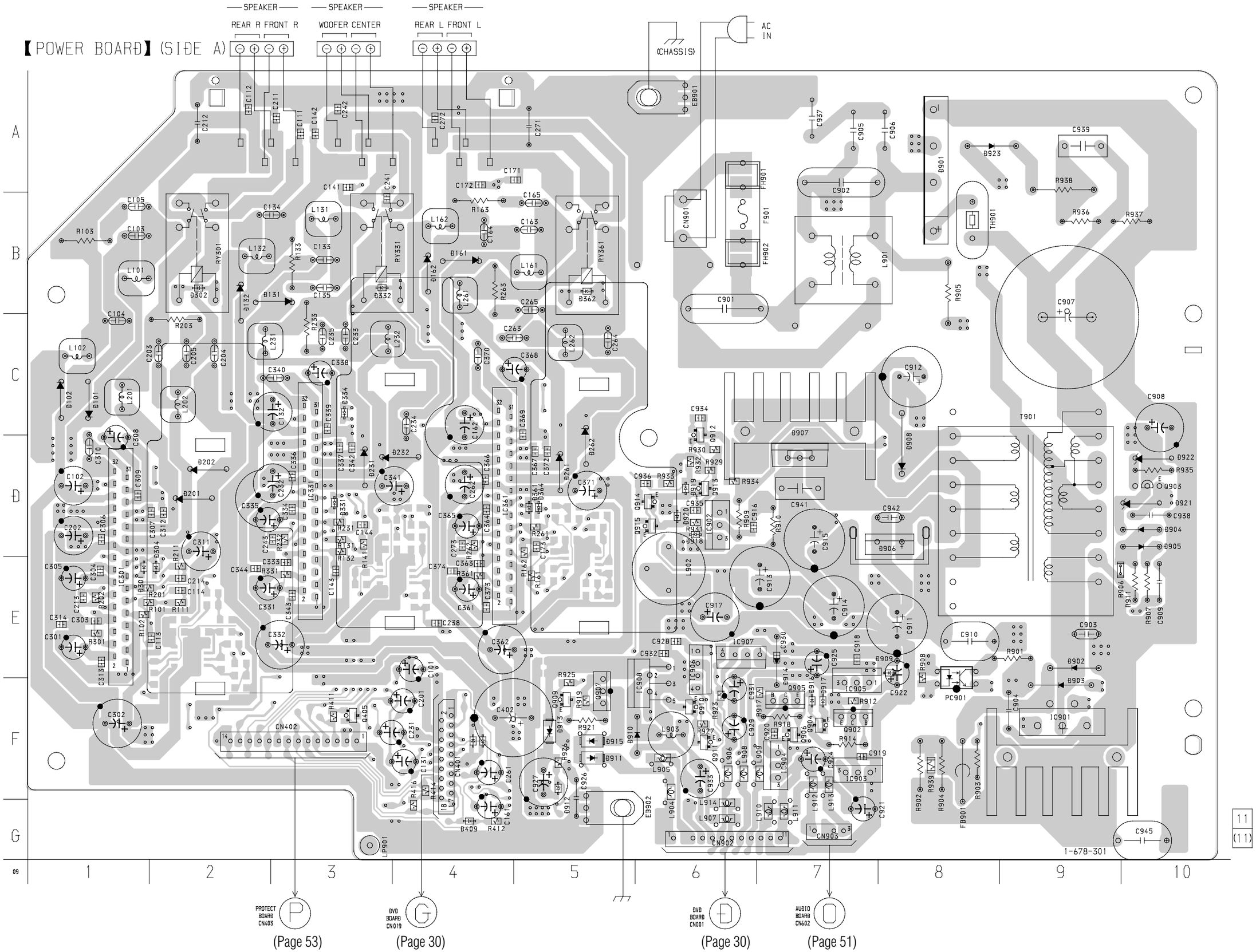


6-29. PRINTED WIRING BOARD – POWER (AEP, UK, SP, HK, E32, AUS ONLY) SECTION –

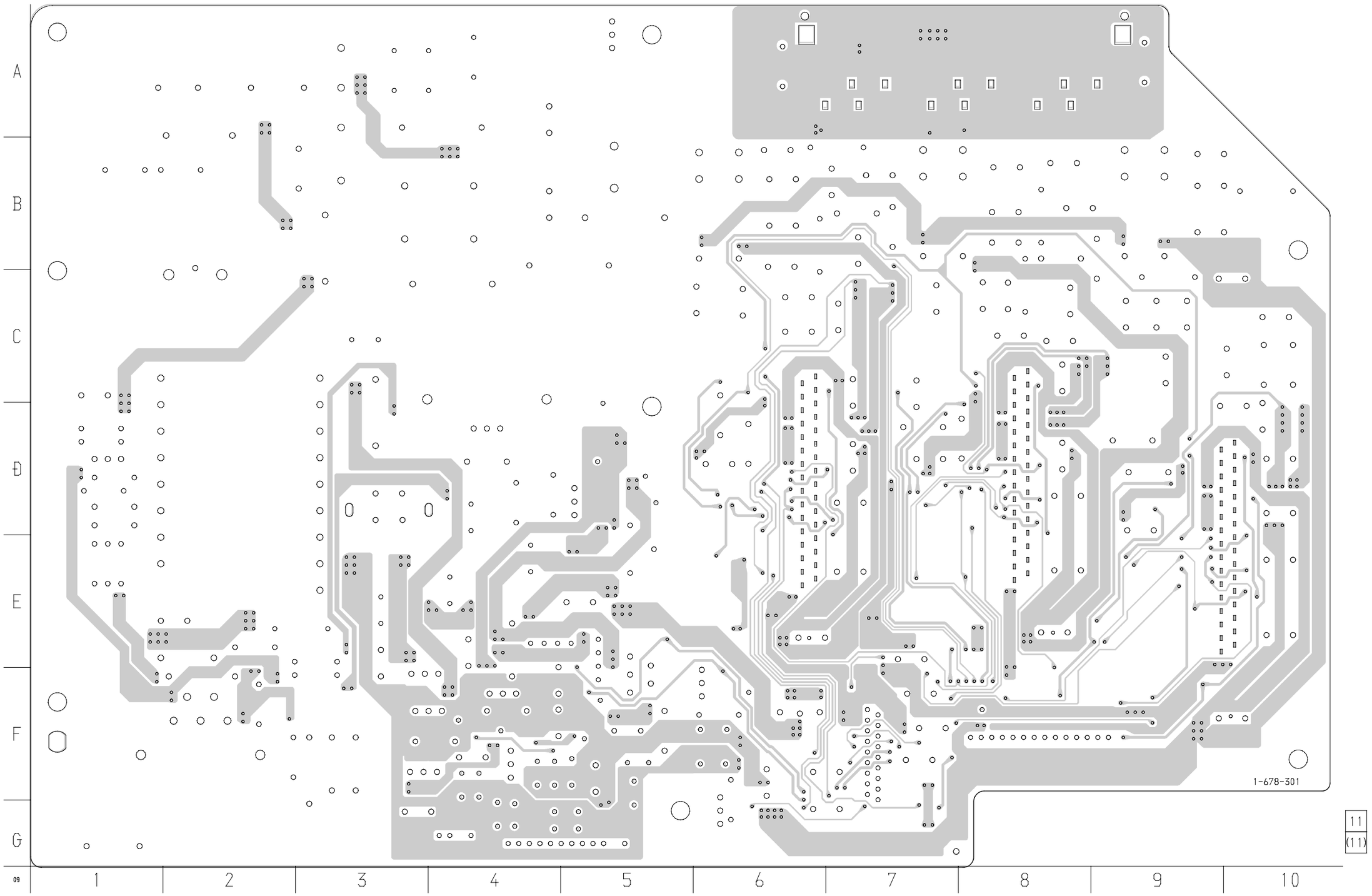
• See page 19 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D101	C-1
D102	C-1
D131	B-2
D132	B-2
D161	B-4
D162	B-4
D201	D-2
D202	D-2
D231	D-3
D232	D-3
D261	D-5
D262	D-5
D301	E-1
D302	B-2
D304	E-2
D331	D-3
D332	B-3
D334	C-3
D361	D-5
D362	B-5
D364	D-5
D409	G-4
D901	A-1
D902	E-9
D903	F-9
D904	D10
D905	D-10
D906	E-8
D907	D-7
D908	D-8
D909	E-8
D910	F-5
D911	F-5
D912	F-5
D913	F-5
D914	E-7
D915	F-5
D916	F-7
D917	F-7
D918	D-6
D919	D-6
D920	D-6
D921	D-10
D922	D-10
D923	A-8
IC301	E-1
IC331	D-3
IC361	D-4
IC901	F-9
IC902	D-6
IC903	F-7
IC904	F-7
IC905	E-7
IC906	D-6
IC907	E-6
IC908	E-6
Q405	F-3
Q902	F-7
Q903	D-10
Q904	F-7
Q905	F-7
Q906	F-7
Q907	F-5
Q909	F-5
Q910	F-6
Q911	F-6
Q912	C-6
Q913	D-6
Q914	D-6
Q915	D-6

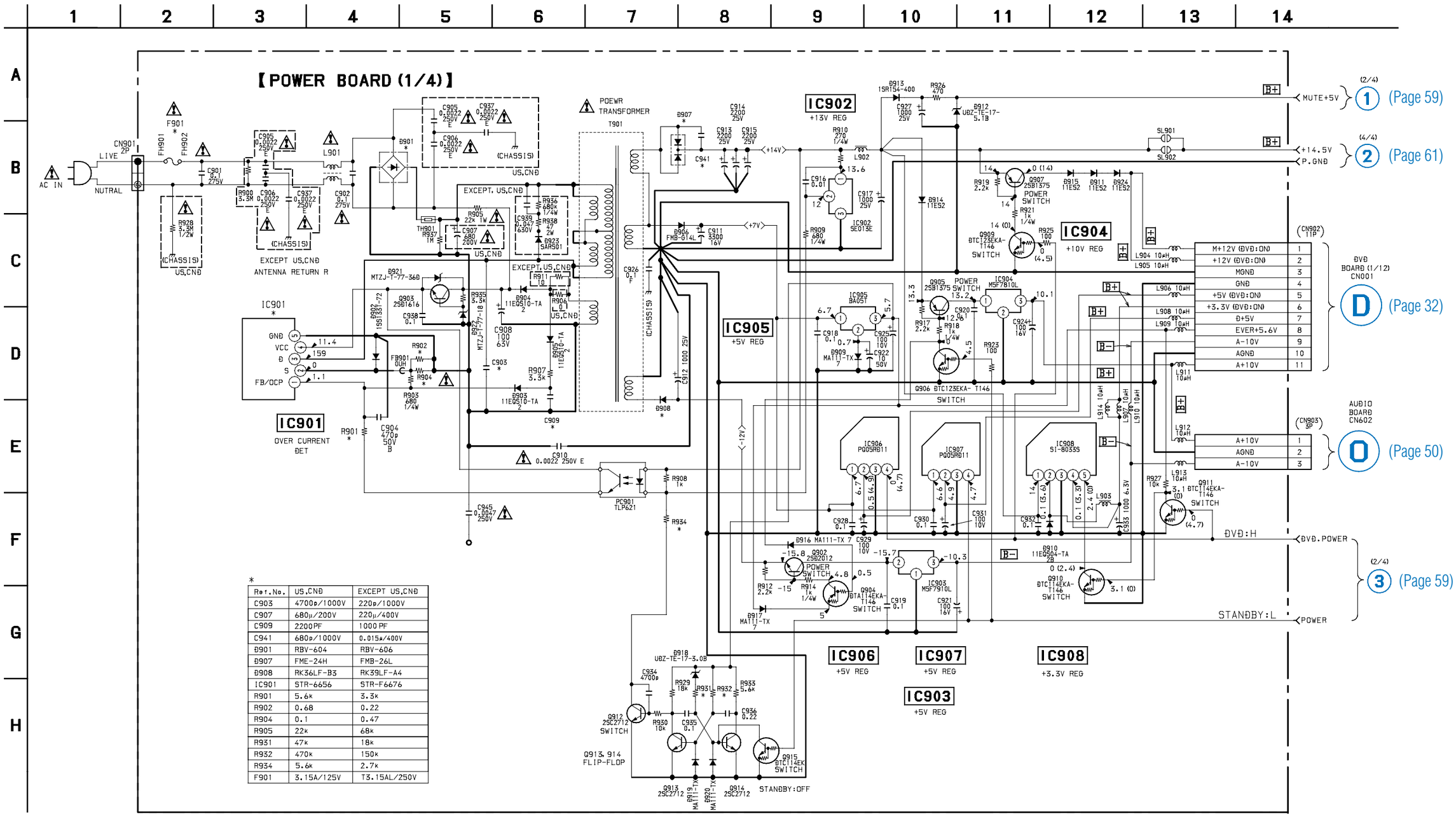


【POWER BOARD】(SIDE B)



6-30. SCHEMATIC DIAGRAM – POWER (1/4) SECTION –

- See page 20 for Waveforms.
- See page 54 for Printed Wiring Board.



*

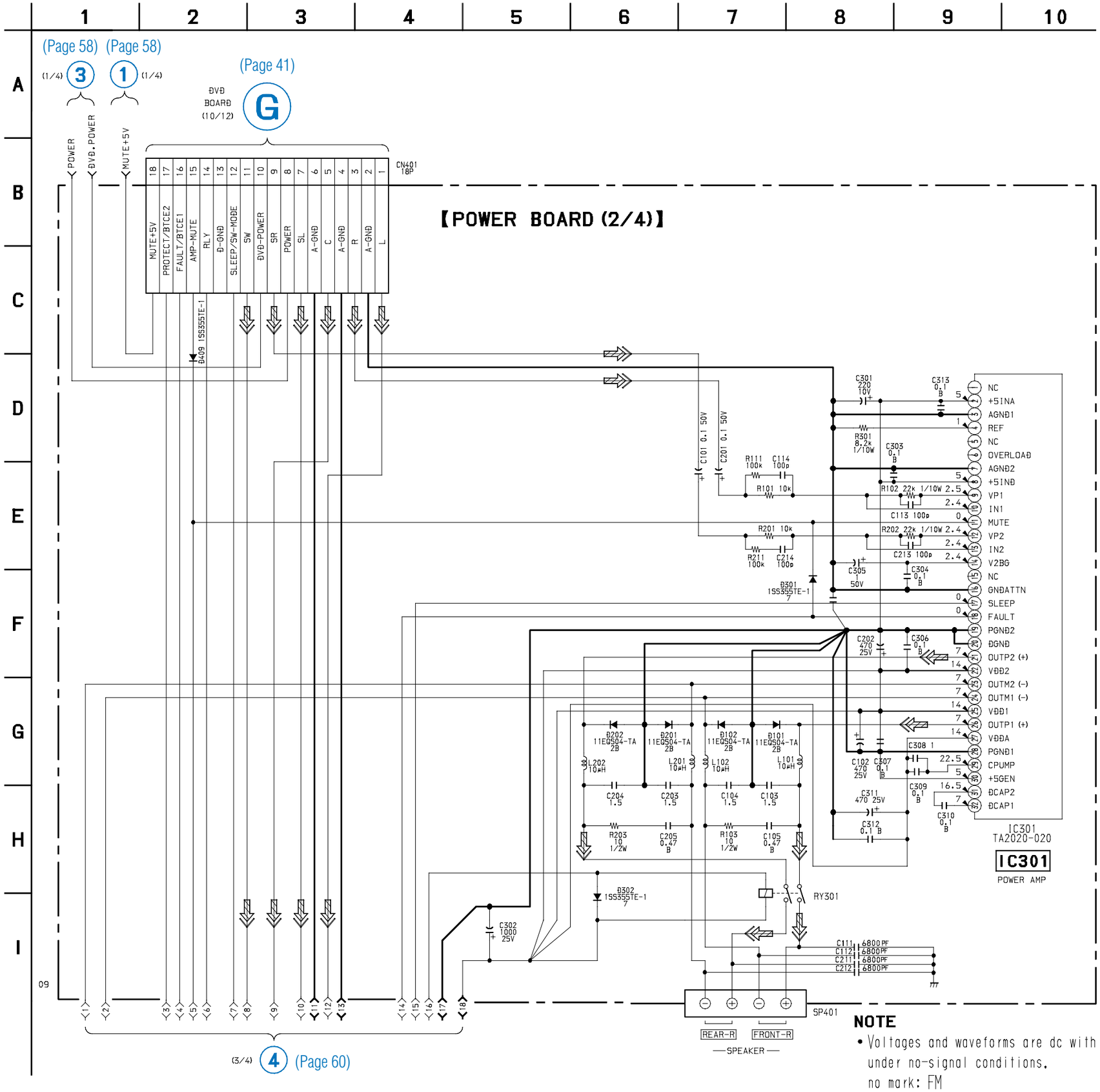
Ref.No.	US,CNÐ	EXCEPT US,CNÐ
C903	4700p/1000V	220p/1000V
C907	680µ/200V	220µ/400V
C909	2200PF	1000 PF
C941	680p/1000V	0.015µ/400V
Ð901	RBV-604	RBV-606
Ð907	FME-24H	FMB-26L
Ð908	RK36LF-B3	RK39LF-A4
IC901	STR-6656	STR-F6676
R901	5.6k	3.3k
R902	0.68	0.22
R904	0.1	0.47
R905	22k	68k
R931	47k	18k
R932	470k	150k
R934	5.6k	2.7k
F901	3.15A/125V	T3.15AL/250V

NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM
  ( ): ÐVÐ

6-31. SCHEMATIC DIAGRAM – POWER (2/4) SECTION –

- See page 20 for Waveforms.
- See page 54 for Printed Wiring Board.

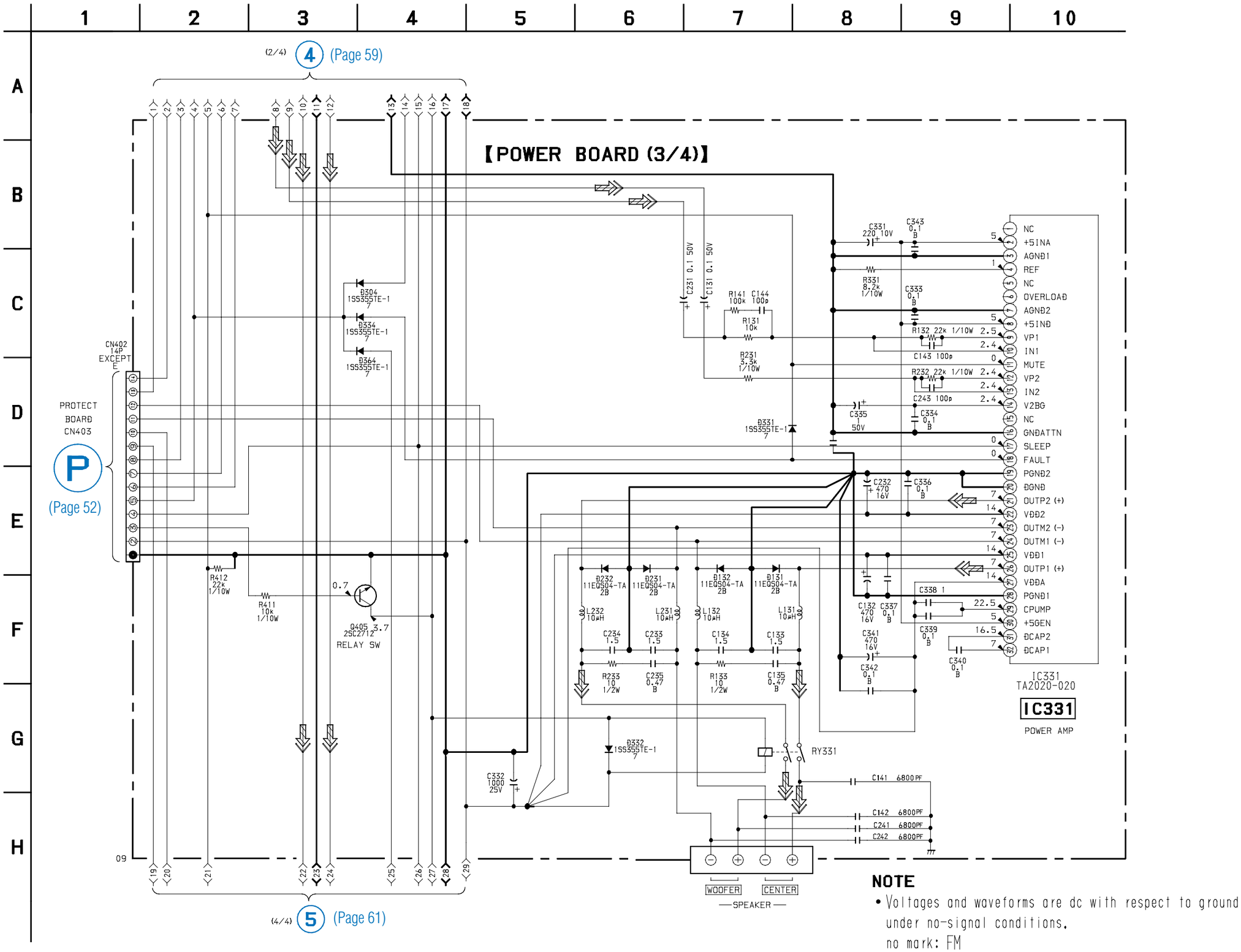


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

6-32. SCHEMATIC DIAGRAM – POWER (3/4) SECTION –

- **See page 20 for Waveforms.**
- **See page 54 for Printed Wiring Board.**

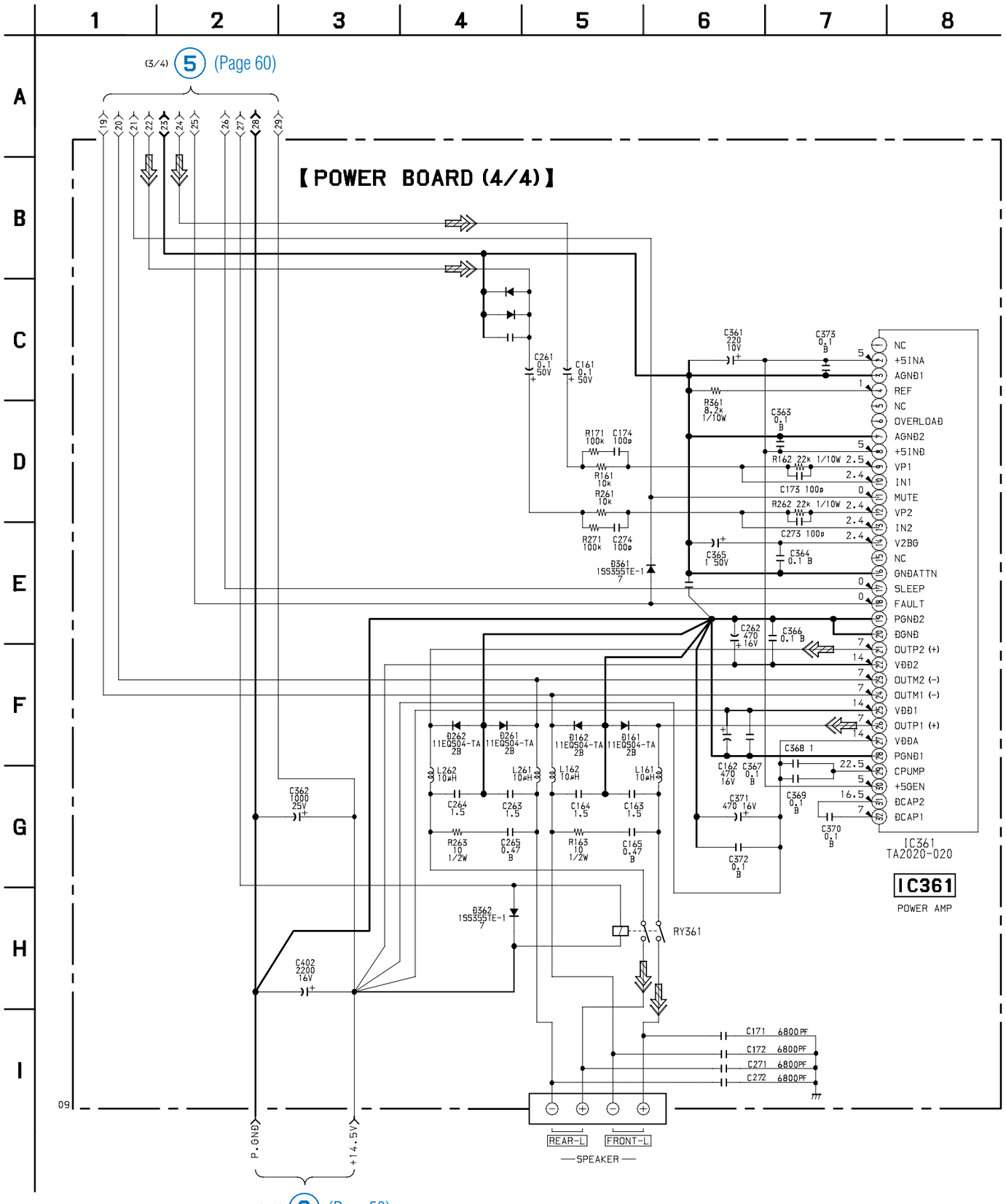


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

6-33. SCHEMATIC DIAGRAM – POWER (4/4) SECTION –

- See page 20 for Waveforms.
- See page 54 for Printed Wiring Board.

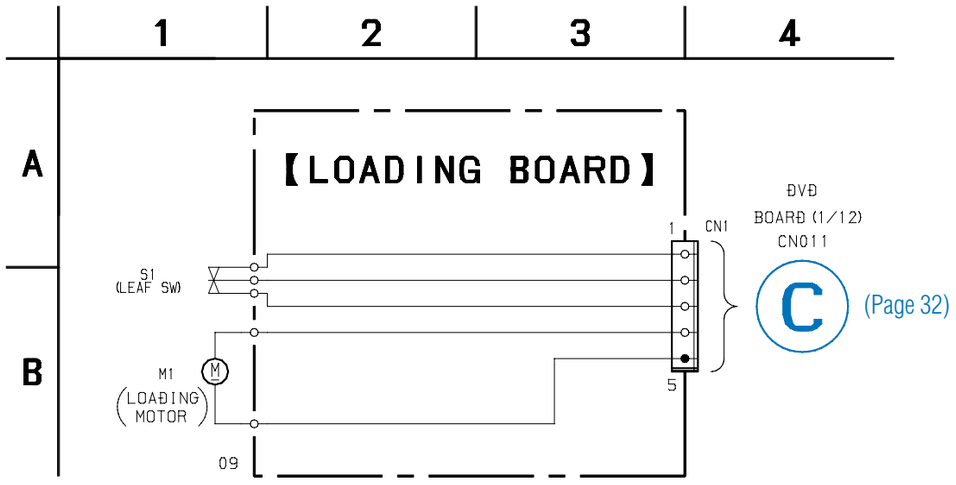


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

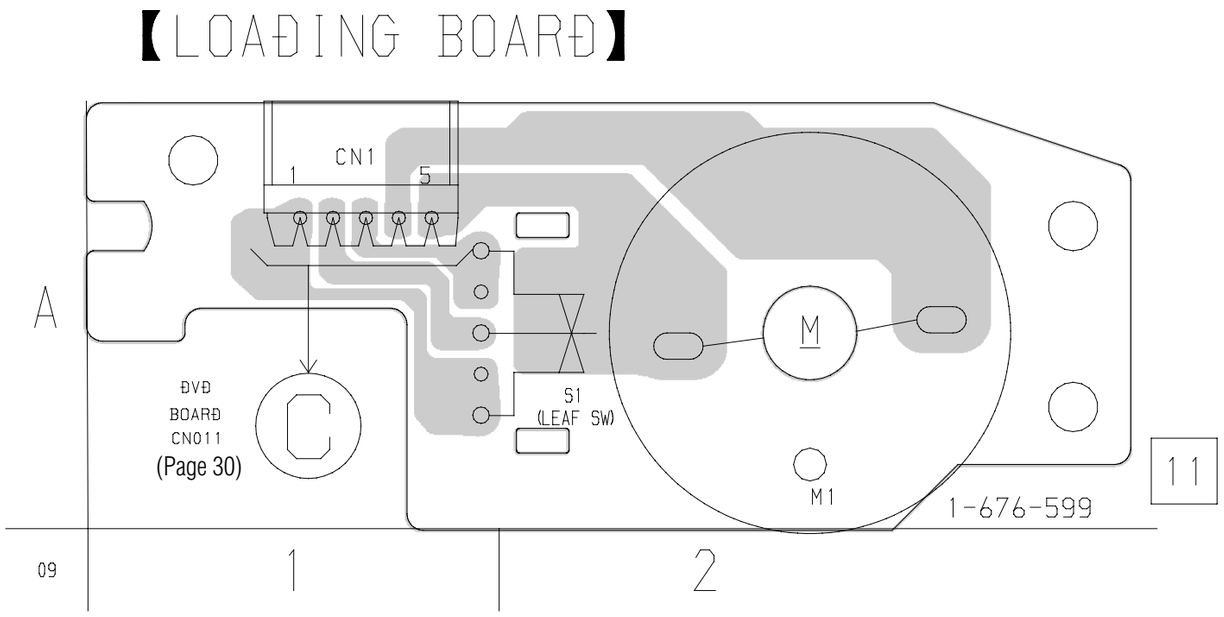
6-34. SCHEMATIC DIAGRAM – LOADING SECTION –

• See page 20 for Waveforms.



6-35. PRINTED WIRING BOARD – LOADING SECTION –

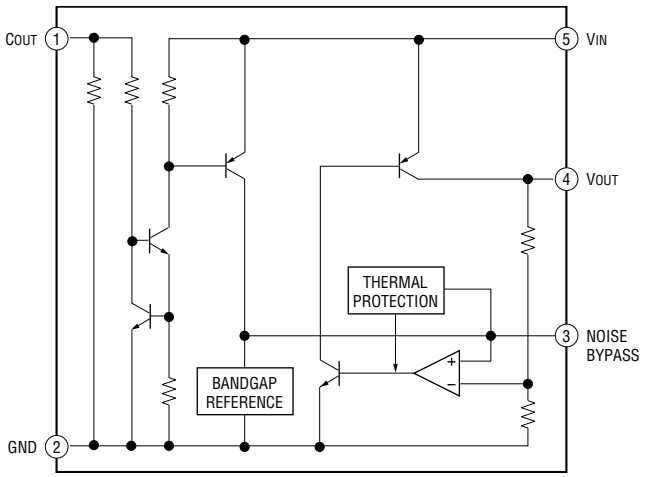
• See page 19 for Circuit Boards Location.



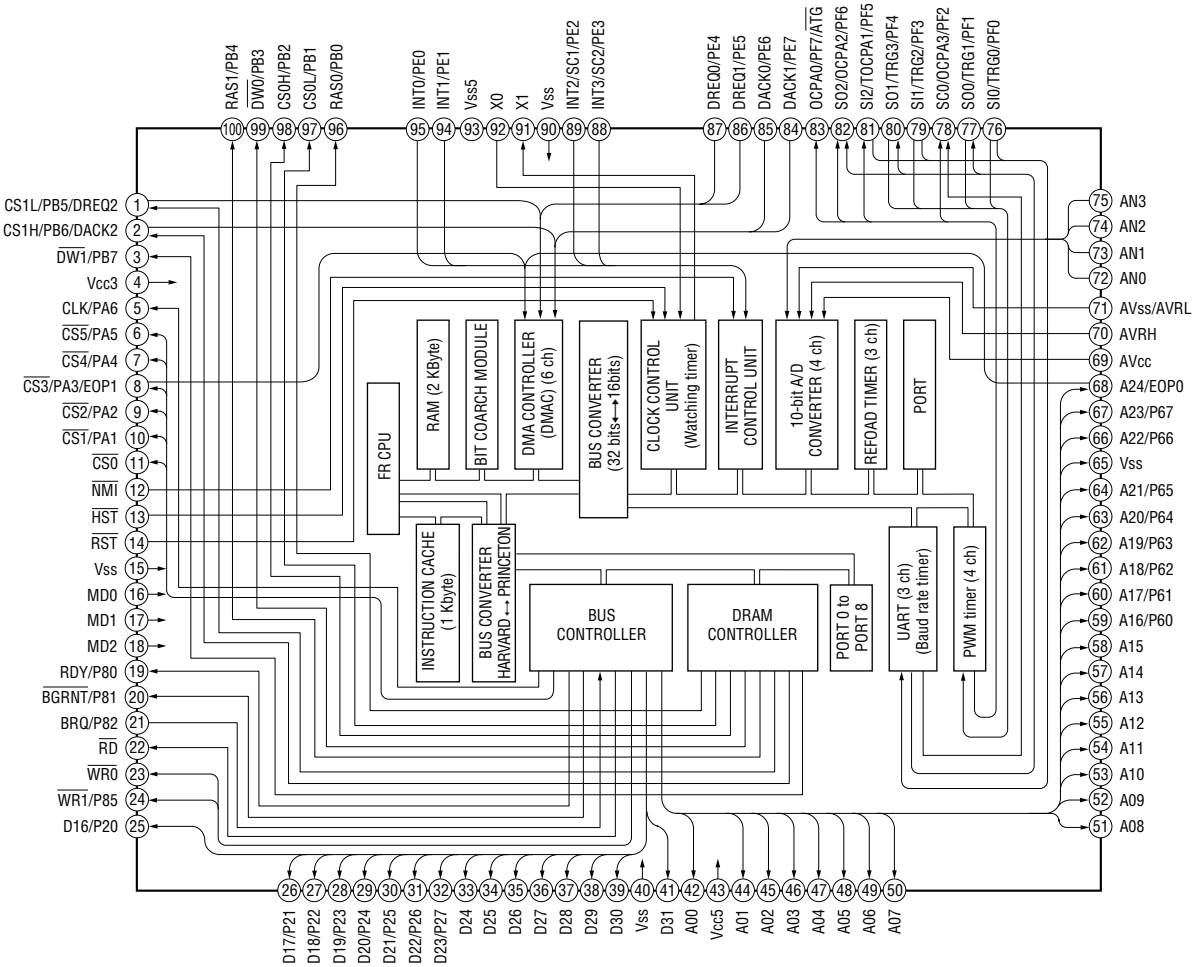
6-36. IC BLOCK DIAGRAMS

• DVD Board

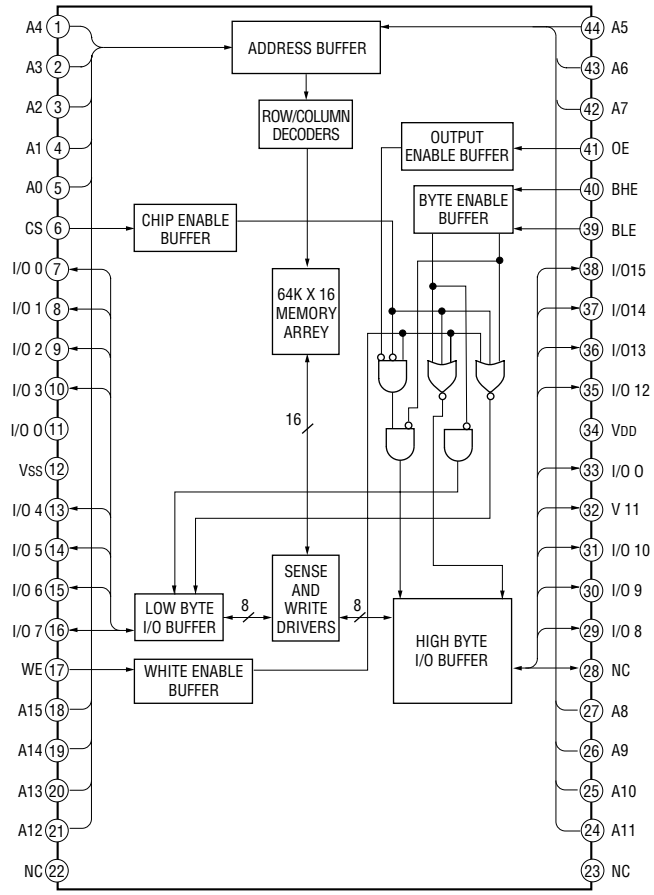
IC005, 404 NJM2370U33



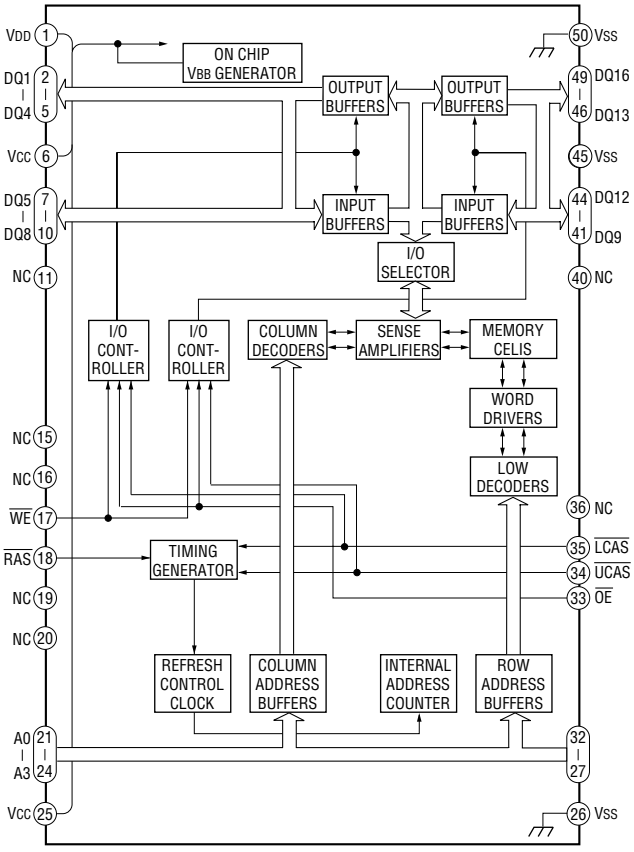
IC202 MB91101APFV



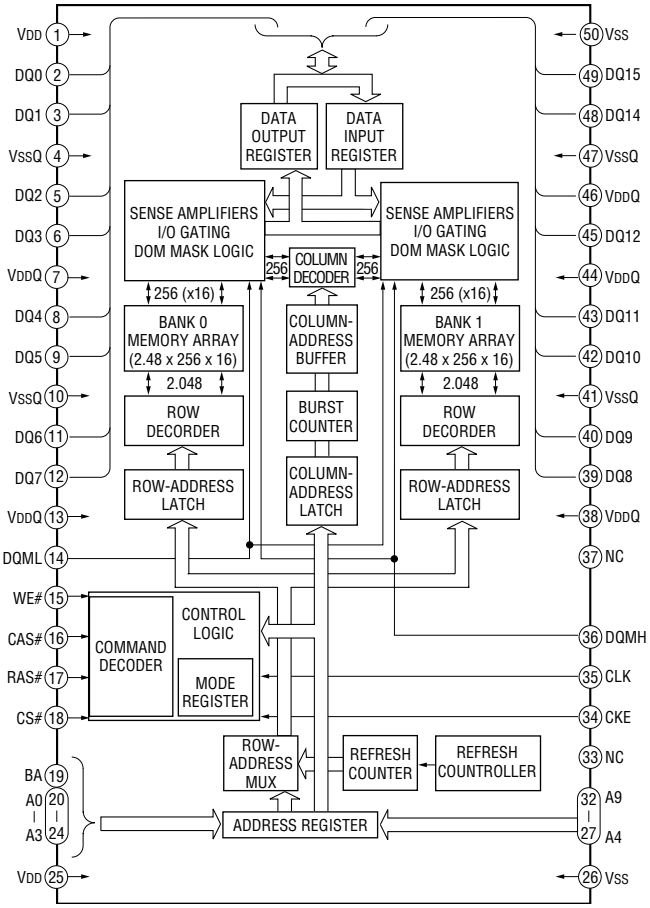
IC204 IDT71V016S20PHAU



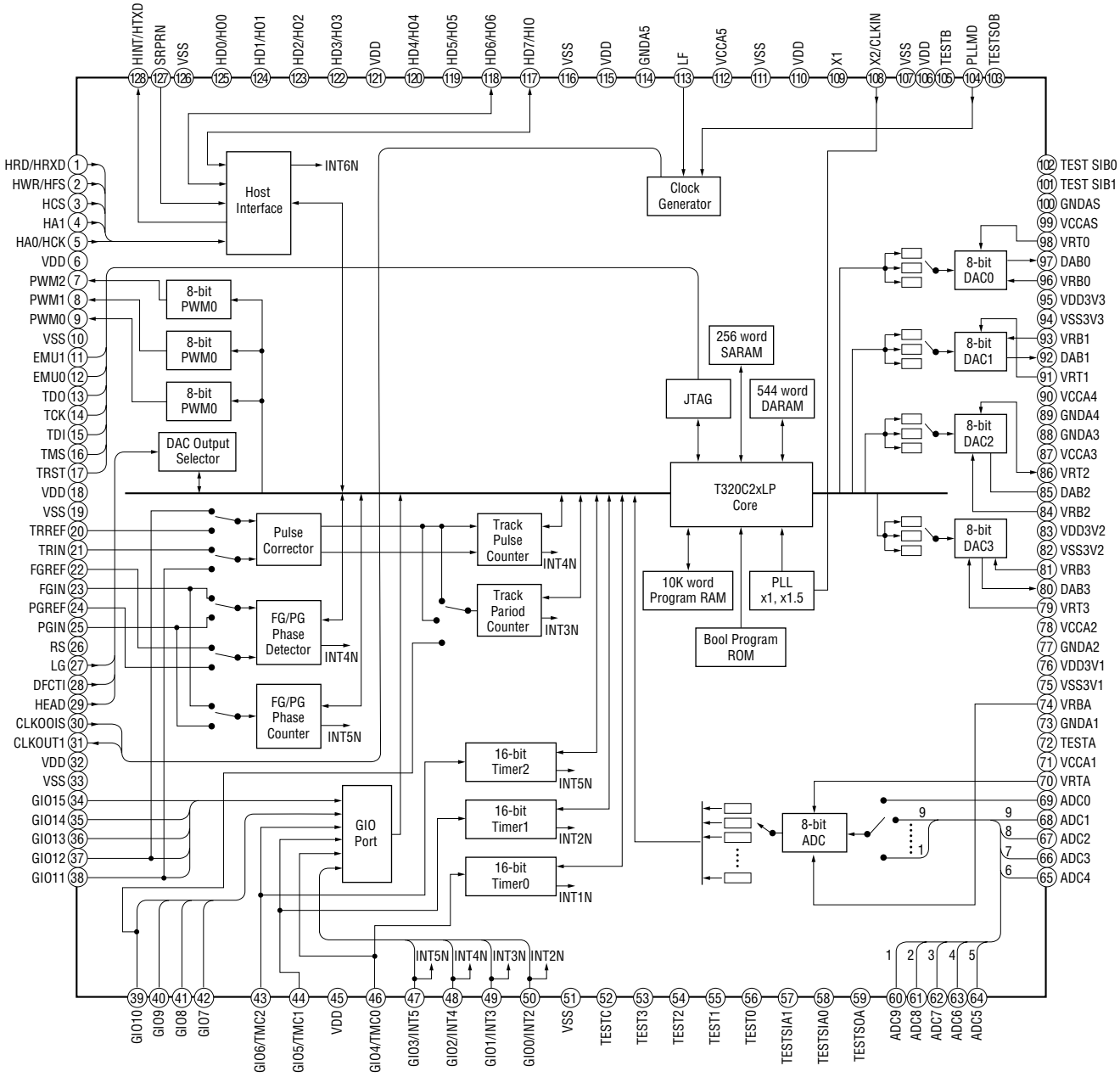
IC304 MSM51V1816



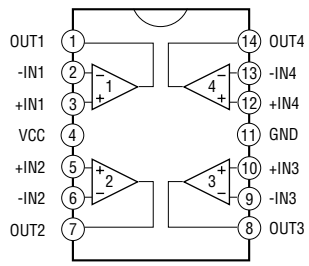
IC402, 403 MT48LC1M16A1TG



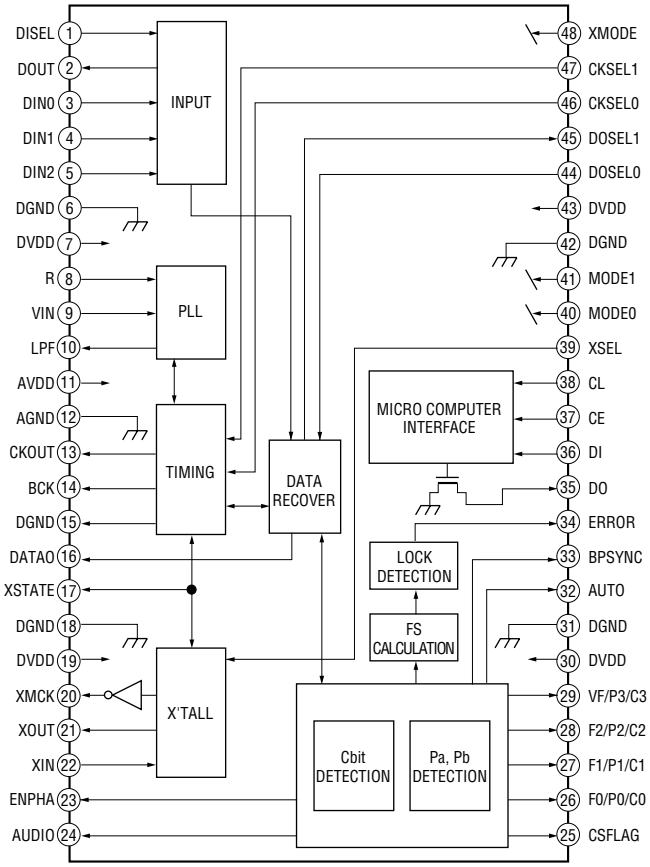
IC701 CXD8791AQ



IC803 BA10324AFV

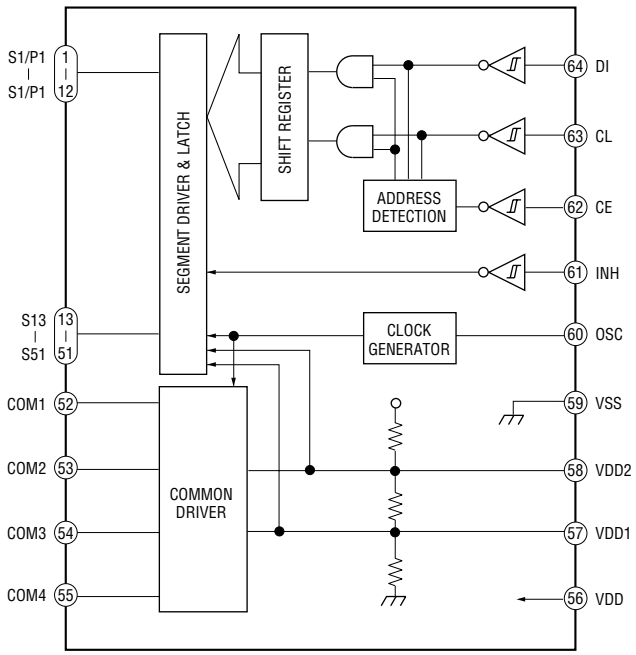


IC907 LC89055W-RA8



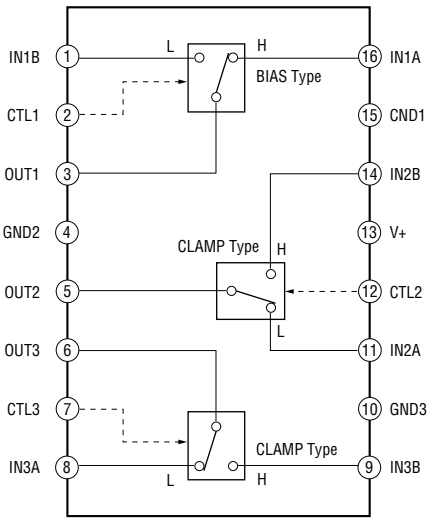
• FP-932 Board

IC100 LC75824E



• VIDEO Board

IC702 NJM2285



6-37. IC PIN FUNCTIONS

• IC202 DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR (MB911101APFV-G-BND) (DVD Board)

Pin No.	Pin Name	I/O	Function
1	DREQ2/PB5/CS1L	O	Analog filter gain control
2	DACK2/PB6/CS1H	O	VES gain control “H” : VES
3	PB7/$\overline{DW1}$	O	Rear CH boost “H” : rear boost
4	VCC3	–	Power supply
5	PA6/CLK	O	CPU clock out (25 MHz)
6	PA5/$\overline{CS5}$	O	Not used
7	PA4/$\overline{CS4}$	O	Chip select signal for ARP, SERVO DSP and HGA
8	EOP1/PA3/$\overline{CS3}$	O	Chip select signal for SDRAM and AV DEC
9	PA2/$\overline{CS2}$	O	Chip select signal for REG and AV DEC
10	PA1/$\overline{CS1}$	O	Chip select signal for external SRAM
11	$\overline{CS0}$	O	Chip select signal for external FLASH ROM
12	$\overline{NMI}$	I	Not used (fixed at “H”)
13	$\overline{HST}$	I	Not used (fixed at “H”)
14	$\overline{RST}$	I	Reset signal input from IF CON
15	GND	–	Ground
16	MD0	I	Input of mode select 0 (fixed at “1”)
17	MD1	I	Input of mode select 1 (fixed at “0”)
18	MD2	I	Input of mode select 2 (fixed at “0”)
19	P80/RDY	I	Wait signal input
20	P81/$\overline{BGRNT}$	I	Test terminal (fixed at “H”)
21	P82/BRQ	I	Test terminal (fixed at “L”)
22	$\overline{RD}$	O	Read enable signal output
23	$\overline{WR0}$	O	High byte write enable signal output (16 bit and 8 bit)
24	P85/$\overline{WR1}$	O	Low byte write enable signal output (16 bit only)
25	P20/D16	I/O	Data bus D0 (16 bit)
26	P21/D17	I/O	Data bus D1 (16 bit)
27	P22/D18	I/O	Data bus D2 (16 bit)
28	P23/D19	I/O	Data bus D3 (16 bit)
29	P24/D20	I/O	Data bus D4 (16 bit)
30	P25/D21	I/O	Data bus D5 (16 bit)
31	P26/D22	I/O	Data bus D6 (16 bit)
32	P27/D23	I/O	Data bus D7 (16 bit)
33	D24	I/O	Data bus D8 (16 bit), D0 (8 bit)
34	D25	I/O	Data bus D9 (16 bit), D1 (8 bit)
35	D26	I/O	Data bus D10 (16 bit), D2 (8 bit)
36	D27	I/O	Data bus D11 (16 bit), D3 (8 bit)
37	D28	I/O	Data bus D12 (16 bit), D4 (8 bit)
38	D29	I/O	Data bus D13 (16 bit), D5 (8 bit)
39	D30	I/O	Data bus D14 (16 bit), D6 (8 bit)
40	GND	–	Ground
41	D31	I/O	Data bus D15 (16 bit), D7 (8 bit)
42	A00	–	Address bus A0
43	VCC5	O	Power supply
44	A01	O	Address bus A1
45	A02	O	Address bus A2
46	A03	O	Address bus A3
47	A04	O	Address bus A4
48	A05	O	Address bus A5
49	A06	O	Address bus A6
50	A07	O	Address bus A7

Pin No.	Pin Name	I/O	Function
51	A08	O	Address bus A8
52	A09	O	Address bus A9
53	A10	O	Address bus A10
54	A11	O	Address bus A11
55	A12	O	Address bus A12
56	A13	O	Address bus A13
57	A14	O	Address bus A14
58	A15	O	Address bus A15
59	A16/P60	O	Address bus A16
60	A17/P61	O	Address bus A17
61	A18/P62	O	Address bus A18
62	A19/P63	O	Address bus A19
63	A20/P64	O	Address bus A20
64	A21/P65	O	Address bus A21
65	GND	–	Ground
66	A22/P66	O	PLL IC control output “H” : DOUBLE
67	A23/P67	I	DIAG mode signal input “L” : DIAG
68	A24/EOP0	I	Not used
69	AVCC	–	Power supply
70	AVRH	–	Reference power supply (+3.3 V)
71	AVSS/AVRL	–	Ground
72	AN0	I	Set of mode 0
73	AN1	I	Set of mode 1
74	AN2	I	Set of mode 2
75	AN3	I	Set of mode 3 (fixed at “H”)
76	SI0/TRG0/PF0	I	Serial data input from IF CON and EEPROM
77	SI1/TRG1/PF1	O	Serial data output to IF CON and EEPROM
78	SC0/PF2/OCPA3	O	Serial clock output to IF CON and EEPROM
79	SI1/TRG2/PF3	I	Serial bus 1 (for data input)
80	SO1/TRG3/PF4	O	Serial bus 1 (for data output)
81	SI2/PF5/OCPA1	I	Serial bus 2 (for data input)
82	SO2/PF6/OCPA2	O	Serial bus 2 (for data output)
83	PF7/OCPA0/$\overline{\text{ATG}}$	O	Reset signal output
84	DACK1/PE7	O	Output of DMA-ACK 0 to AV DEC
85	DACK0/PE0	O	Output of DMA-ACK 1 to AV DEC
86	DREQ1/PE5	I	Input of DMA-REQ 0 from AV DEC
87	DREQ0/PE4	I	Input of DMA-REQ 1 from AV DEC
88	INT3/PE3/SC2	I	Input of interrupt from HGA
89	INT2/PE2/SC1	O	Serial clock output
90	VSS	–	Ground
91	X1	O	Clock output (12.5 MHz)
92	X0	I	Clock input (12.5 MHz)
93	VCC5	–	Power supply
94	INT1/PE1	I	Input of interrupt ARP and SERVO DSP
95	INT0/PE0	I	Input of interrupt from AV DEC
96	RAS0/PB0	I	Rear panel lime input select (“H” : DISC “L” : EXT)
97	CS0L/PB1	O	Chip select signal to IF CON
98	CS0H/PB2	O	Chip select signal to DAC (Lt and Rt)
99	$\overline{\text{DW0}}$/PB3	O	Chip select signal to DAC (L and R)
100	RAS1/PB4	O	DVD/CD select (“H” : 44.1 kHz “L” : 48 kHz)

• IC903 I/F MICROCOMPUTER (M30622MA-A33FP) (DVD Board)

Pin No.	Pin Name	I/O	Function
1	IFSIO	O	Data output for SYS COM
2	IFSCO	I	Clock input for SYS COM
3	YSSCSB	O	Chip select for SUB DSP (YSS912)
4	YSS_CS	O	Chip select for MIN DSP (YSS912)
5	YSS_CI	O	Data output for DSP (YSS912)
6	YSS_SO	I	Data input for DSP (YSS912)
7	YSSCK	O	Clock for DSP (YSS912)
8	(GND)	–	Ground
9	CNVSS	–	CNVSS
10	YSSIC	O	Reset for DSP (YSS912)
11	AN/DIG	O	Analog/Digital
12	RESET	–	Reset
13	XOUT	–	16 MHz
14	VSS	–	Ground
15	XIN	–	16 MHz
16	VCC	–	+5 V
17	NMI	I	Not used
18	STOP	I	STOP input
19	ASEL1	O	Analog select
20	ASEL2	O	Analog select
21	AUMUTE	O	Audio mute
22	VMUTE	O	Video mute
23	ASEL1	O	Video select
24	VSEL2	O	Video select
25	D1/P1	O	Dimmer
26	D2/P2	O	Dimmer
27	P3	I	Not used
28	P4	I	Not used
29	NO USE	I	Not used
30	TSTPORT	I	Test port
31	TXD1	O	For flash write
32	RXD1	O	For flash write
33	CLK1	O	For flash write
34	RTS1	O	For flash write
35	FLDATA	O	Data output for IC100 (LC75824)
36	FLINH	O	Indicator lamp terminal for IC100 (LC75824)
37	FLCLK	O	Clock for IC100 (LC75824)
38	FL_CS	O	Chip select for IC100 (LC75824)
39	STBY	O	Standby LED
40	REAR-SW	O	Rear switch
41	HOLD	O	For flash write
42	SIRCS	I	SIRCS
43	F_RLT	O	Full relay
44	POWRY	O	Power relay
45	SWMODE/SLEEP	O	Sleep for digital amplifier
46	WR	O	For flash write
47	TUNCLK	O	Clock for LC72137
48	TUNCE	O	Chip enable for LC72137
49	TUNSTE	I	Stero detection for LC72137
50	FM750N	O	AM/FM switch for LC72137

Pin No.	Pin Name	I/O	Function
51	TUN_DO	O	Data output for LC72137
52	TUN_DI	I	Data input for LC72137
53	TUNED	O	Tuning end for LC72137
54	FAULT/BTCE1	O	FAULT for digital amplifier
55	PROTECT/BTCE2	O	PROTECT for digital amplifier
56	VOL_CE	O	Chip enable for IC507 (TC9482)
57	VOL_DAT	O	Data output for IC507 (TC9482)
58	VOL_CLK	O	Clock for IC507 (TC9482)
59	SWMUTE	O	Not used
60	CS_MUTE	O	Not used
61	LR_MUTE	O	Not used
62	VCC	–	+5 V
63	AMP_MUTE	O	Mute for digital amplifier
64	VSS	–	Ground
65	HP_MUTE	–	MUTE during head phone IN
66	HP_SW	I	Headphone IN/OUT
67	S_MUTE	O	Soft mute for IC906 (AK4527)
68	PD	O	Reset for IC906 (AK4527)
69	CDT1	O	Data output for IC906 (AK4527)
70	CLK	O	Clock for IC906 (AK4527)
71	CS	O	Chip select for IC906 (AK4527)
72	RDS1	O	Not used
73	IF_OK	O	SYS COM data transmission/reception use
74	XVIFCS	I	SYS COM data transmission use
75	RDS2	I	Not used
76	XFIFNT	O	SYS COM data transmission start use
77	XFRRST	O	Reset for SYS COM
78	DVDPOW	O	Power ON/OFF for SYS COM
79	MODEL4	I	Distinguishing destination
80	MODEL3	I	Distinguishing destination
81	MODEL2	I	Distinguishing destination
82	DIRXMD	O	Reset for IC907 (LC89055)
83	DIRCLK	O	Clock for IC907 (LC89055)
84	DIRLAT	O	Latch for IC907 (LC89055)
85	DIRWRT	O	Data output for IC907 (LC89055)
86	DIRRDT	I	Data input for IC907 (LC89055)
87	DIRERR	I	Error for IC907 (LC89055)
88	ZERO	I	ZERO data for IC907 (LC89055)
89	NO USE	I	Not used
90	+3.3V	I	Not used
91	+5V	I	Not used
92	Key 2	I	KEY input
93	Key 1	I	KEY input
94	ENB	I	Encoder
95	ENA	I	Encoder
96	AVSS	–	Ground for AD
97	NO USE	I	Not used
98	VREF	–	+5 V for AD
99	AVCC	–	+5 V for AD
100	IFSDO	I	Data input for SYS COM

SECTION 7
EXPLODED VIEWS

NOTE:

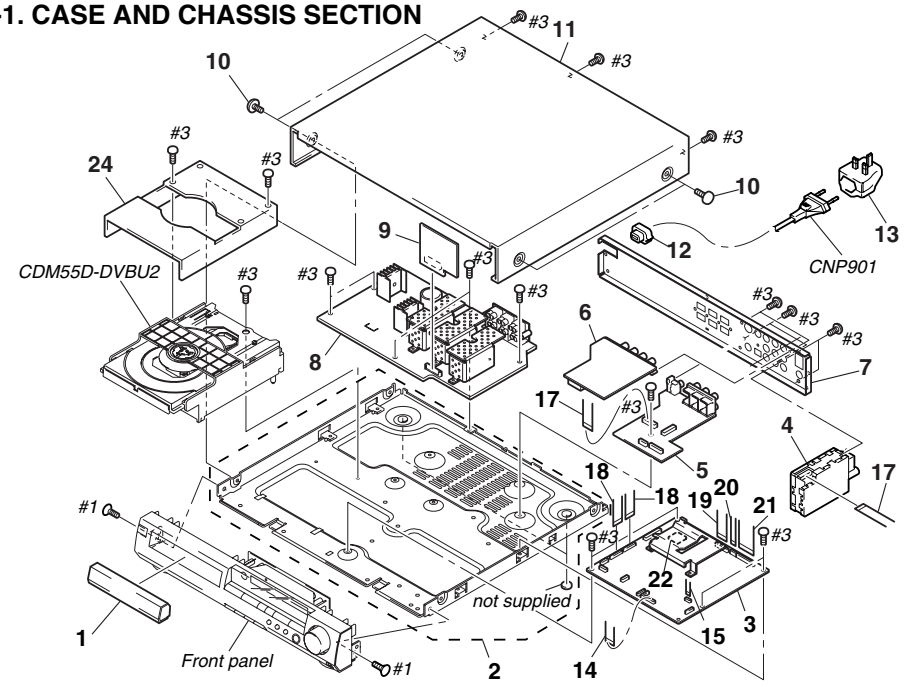
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . . (RED)
  ↑ ↑
  Parts color Cabinets color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  AUS : Australian model
  SP : Singapole model
  HK : Hong Kong model
  CH : Chinese model
  E32 : Central & South America model
  CEN : AC230V area
  MX : Mexican
  RU : Russian
  CEU : East European & Russian
  E12 : AC220-230V area
  EA3 : Saudi Arabia
  KR : Korean
  TW : Taiwan

以阴影和⚠标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

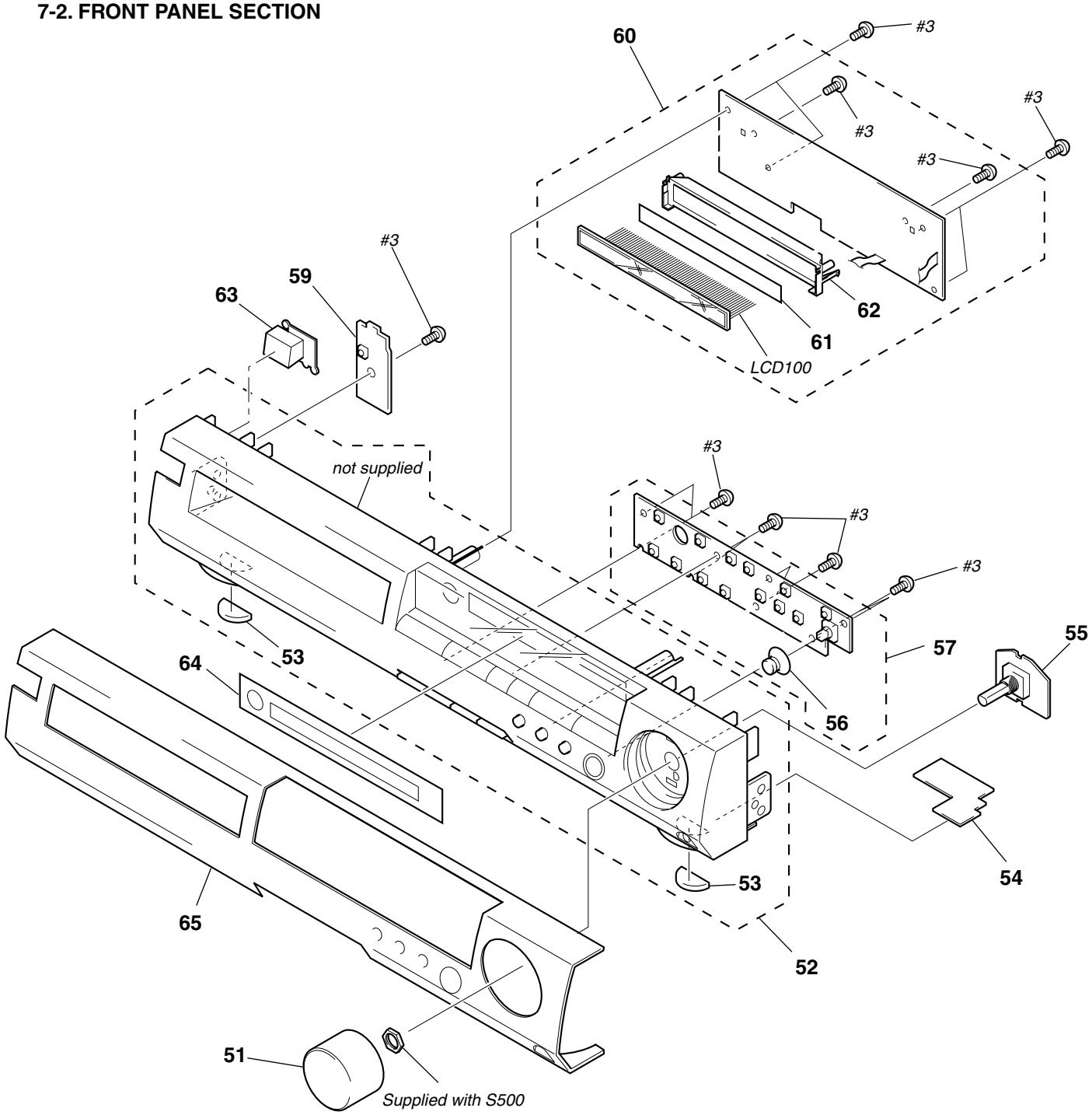
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CASE AND CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-4952-565-1	PNEL ASSY, LOADING	
2	X-4952-947-1	CHASSIS SUB ASSY	
3	A-4424-426-A	DVD BOARD, COMPLETE (CND,US)	
3	A-4424-645-A	DVD BOARD, COMPLETE (AEP,CEN,CEU,UK)	
3	A-4424-649-A	DVD BOARD, COMPLETE (HK,SP,TW)	
3	A-4424-651-A	DVD BOARD, COMPLETE (AUS)	
3	A-4424-838-A	DVD BOARD, COMPLETE (MX)	
3	A-4424-840-A	DVD BOARD, COMPLETE (RU)	
3	A-4424-936-A	DVD BOARD, COMPLETE (EA3)	
3	A-4440-266-A	DVD BOARD, COMPLETE (KR)	
3	A-4440-353-A	DVD BOARD, COMPLETE (CH)	
3	A-4473-704-A	DVD BOARD, COMPLETE (E32)	
3	A-4475-303-A	DVD BOARD, COMPLETE (E12)	
4	A-4424-428-A	TUNER BOARD, COMPLETE (CND,US)	
4	A-4424-647-A	TUNER BOARD,ASSY (AEP,CEN,CEU,CH,KR,TW,UK)	
4	A-4424-650-A	TUNER BOARD, ASSY (AUS,E12,E32,EA3,HK,MX,RU,SP)	
5	A-4428-331-A	AUDIO BOARD, COMPLETE (CND,US)	
5	A-4473-125-A	AUDIO BOARD, COMPLETE (AUS,E12,E32,EA3,HK,KR,MX,RU,SP)	
5	A-4473-703-A	AUDIO BOARD, COMPLETE (AEP,CEU,TW,UK)	
5	A-4473-989-A	AUDIO BOARD, COMPLETE (CEN)	
5	A-4726-266-A	AUDIO BOARD, COMPLETE (CH)	
6	A-4428-332-A	VIDEO BOARD, COMPLETE (EXCEPT CH)	
6	A-4726-267-A	VIDEO BOARD, COMPLETE (CH)	
7	X-4952-948-3	PANEL, BACK SUB ASSY (US)	
7	X-4952-950-2	PANEL, BACK SUB ASSY (AEP,UK,CEN,CEU,CH)	
7	X-4952-951-2	PANEL, BACK SUB ASSY (HK)	
7	X-4952-952-2	PANEL, BACK SUB ASSY (AUS)	
7	X-4952-953-2	PANEL, BACK SUB ASSY (E32)	
7	X-4952-979-2	PANEL, BACK SUB ASSY (MX)	
7	X-4952-980-2	PANEL, BACK SUB ASSY (RU)	
7	X-4952-982-2	PANEL, BACK SUB ASSY (SP)	
7	X-4953-173-3	PANEL, BACK SUB ASSY (E12)	
7	X-4953-174-3	PANEL, BACK SUB ASSY (EA)	
7	X-4953-354-2	PANEL, BACK SUB ASSY (CND)	
7	X-4953-617-3	PANEL, BACK SUB ASSY (TW)	
7	X-4953-652-3	PANEL, BACK SUB ASSY (KR)	
8	A-4428-327-A	POWER BOARD, COMPLETE (CND,US)	
8	A-4473-122-A	POWER BOARD, COMPLETE (AEP,AUS,CEN,CEU,KR,RU,UK)	
8	A-4473-132-A	POWER BOARD, COMPLETE (E32,EA3)	
8	A-4473-889-A	POWER BOARD, COMPLETE (MX)	
8	A-4475-197-A	POWER BOARD, COMPLETE (E12,HK,SP)	
8	A-4476-366-A	POWER BOARD, COMPLETE (TW)	
8	A-4726-265-A	POWER BOARD, COMPLETE (CH)	
9	A-4428-329-A	PROTECT BOARD, COMPLETE (EXCEPT CH)	
9	A-4726-264-A	PROTECT BOARD, COMPLETE (CH)	
10	4-221-580-01	SCREW, CASE	
11	X-4952-949-01	CASE SUB ASSY	
12	4-217-350-01	STOPPER, CORD	
13	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK,HK)	
14	1-792-403-11	CABLE, FLAT (14 core)	
15	1-792-404-11	CABLE, FLAT (5 core)	
17	1-792-406-11	CABLE, FLAT (13 core)	
18	1-792-399-11	CABLE, FLAT (18 core)	
19	1-792-400-11	CABLE, FLAT (18 core)	
20	1-792-401-11	CABLE, FLAT (7 core)	
21	1-792-402-11	CABLE, FLAT (27 core)	
22	4-226-340-01	SHEET, RADIATION	
24	4-227-964-11	COVER, MD	
25	4-227-962-03	SHEET (POWER)	
⚠CNP901	1-690-608-11	CORD, POWER (AUS)	
⚠CNP901	1-696-169-22	CORD,POWER (AEP,UK,CEN,CEU,RU,EA,E12,E32,SP,HK,TW)	
⚠CNP901	1-769-079-22	CORD, POWER (KR)	
⚠CNP901	1-775-789-91	CORD, POWER (MX)	
⚠CNP901	1-782-464-21	CORD, POWER (CH)	
⚠CNP901	1-783-531-61	CORD, POWER (US,CND)	

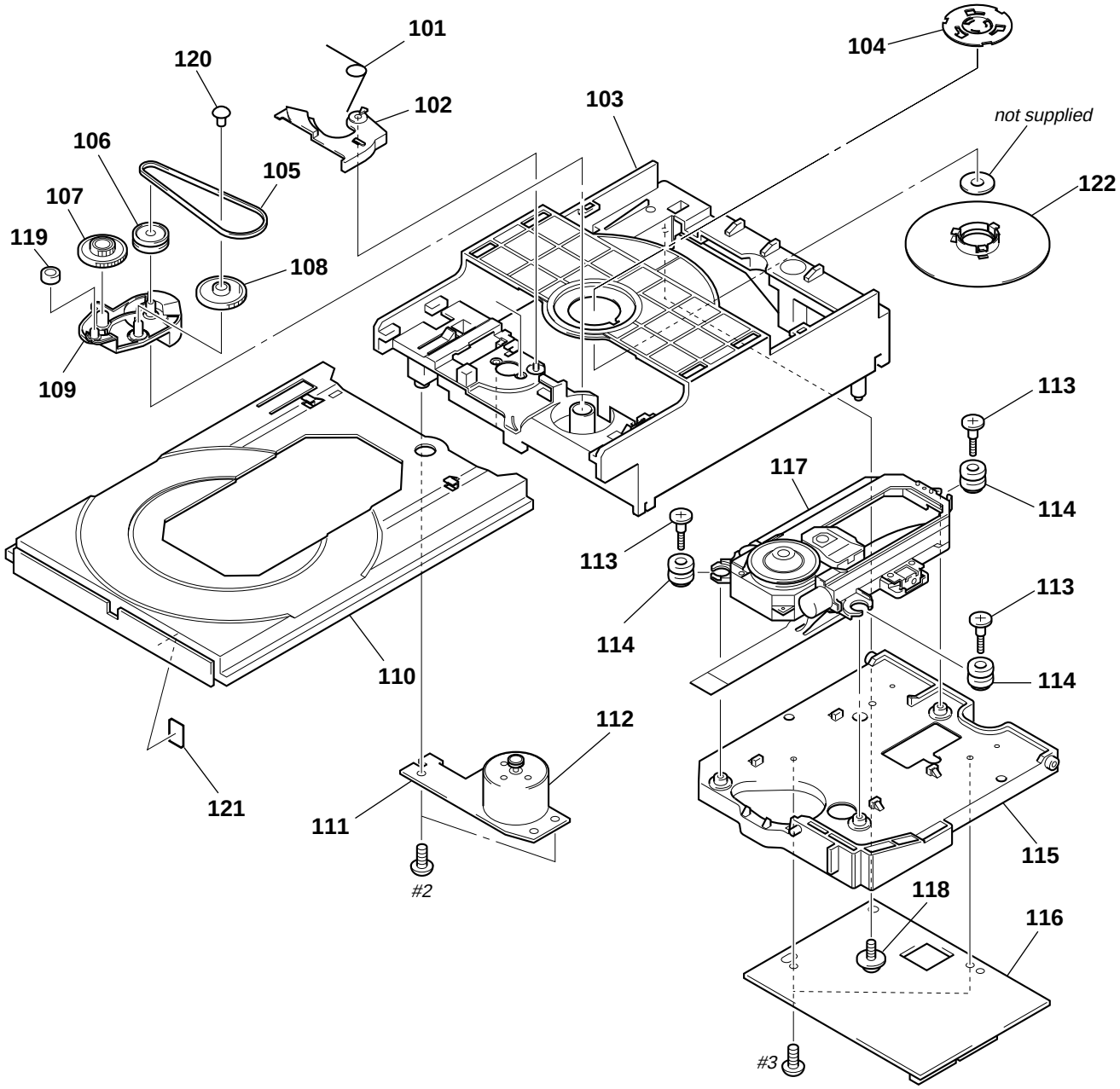
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-4952-564-1	KNOB (VOL) ASSY	
52	X-4952-562-1	PANEL ASSY, FRONT	
53	4-218-204-01	FOOT (FRONT)	
54	A-4428-322-A	HP-932 BOARD, COMPLETE (EXCEPT CH)	
54	A-4428-261-A	HP-932 BOARD, COMPLETE (CH)	
55	A-4428-324-A	VL-932 BOARD, COMPLETE (EXCEPT CH)	
55	A-4428-263-A	VL-932 BOARD, COMPLETE (CH)	
56	A-226-334-01	KNOB (CURSOR)	
57	A-4428-320-A	SW-932 BOARD, COMPLETE	
58	4-931-757-31	SCREW (2.6X8) (1T3B), +BVTP	

Ref. No.	Part No.	Description	Remark
59	A-4428-321-A	PW-932 BOARD, COMPLETE (EXCEPT CH)	
59	A-4726-260-A	PW-932 BOARD, COMPLETE (CH)	
60	A-4428-323-A	FP-932 BOARD, COMPLETE (EXCEPT CH)	
60	A-4726-262-A	FP-932 BOARD, COMPLETE (CH)	
61	4-227-174-01	SHEET, DIFFUSION	
62	4-226-339-01	HOLDER (LED)	
63	X-4952-563-1	BUTTON (POWER) ASSY	
64	X-4952-963-1	WINDOW SUB ASSY	
65	4-226-328-01	PANEL (AL), FRONT	
LCD100	1-803-910-11	DISPLAY PANEL, LIQUID CRYSTAL	

7-3. MECHANISM SECTION



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Ref. No.	Part No.	Description	Remark
101	4-220-239-01	SPRING, TORSION	
102	4-220-229-01	LEVER (SW)	
103	4-225-884-01	CHASSIS (55D)	
104	4-225-966-01	PULLEY (B)	
105	4-221-816-01	BELT (CDM55)	
106	4-220-234-01	PULLEY (LDG)	
107	4-220-237-01	GEAR (A)	
108	4-220-238-01	GEAR (B)	
109	4-220-233-01	CAM (CDM55)	
110	4-224-894-01	TRAY (CDM55)	
111	1-676-599-11	LOADING BOARD	
112	A-4672-891-A	MOTOR (LD) ASSY	

Ref. No.	Part No.	Description	Remark
113	4-981-923-01	SCREW (M), STEP	
114	3-053-847-01	INSULATOR	
115	4-224-895-01	HOLDER (KHM-220)	
116	A-4724-996-A	TK BOARD, COMPLETE	
⚠117	8-820-081-09	OPTICAL PICK-UP KHM220AAA	
118	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
119	4-221-815-01	ROLLER	
120	4-227-598-01	SPACER (55)	
121	4-925-315-31	DAMPER	
122	4-225-965-01	PULLEY (A)	
#2	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#3	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	

SECTION 8
ELECTRICAL PARTS LIST

AUDIO

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  CND : Canadian model
  CH : Chinese model
  AUS : Australian model
  SP : Singapole model
  HK : Hong Kong model
  E32 : Central & South America model
  CEN : AC230V area
  MX : Mexican
  RU : Russian
  CEU : East European & Russian
  E12 : AC220-230V area
  EA3 : Saudi Arabia
  KR : Korean
  TW : Taiwan

When indicating parts by reference number, please include the board name.

以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
	A-4428-331-A	AUDIO BOARD, COMPLETE (CND,US)			
	A-4473-125-A	AUDIO BOARD, COMPLETE (AUS,E12,E32,EA3,HK,KR,MX,RU,SP)			
	A-4473-703-A	AUDIO BOARD, COMPLETE (AEP,CEU,TW,UK)			
	A-4473-989-A	AUDIO BOARD, COMPLETE (CEN)			
	A-4726-266-A	AUDIO BOARD, COMPLETE (CH)			
		**********			
		< CAPACITOR >			
C600	1-126-933-11	ELECT	100uF	20%	16V
C601	1-126-933-11	ELECT	100uF	20%	16V
C602	1-126-933-11	ELECT	100uF	20%	16V
C603	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C604	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C605	1-126-965-11	ELECT	22uF	20%	50V
C606	1-126-965-11	ELECT	22uF	20%	50V
C607	1-126-965-11	ELECT	22uF	20%	50V
C608	1-126-965-11	ELECT	22uF	20%	50V
C609	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C610	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C612	1-126-965-11	ELECT	22uF	20%	50V
C613	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C614	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C615	1-126-965-11	ELECT	22uF	20%	50V
C616	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C617	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C618	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C619	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C621	1-216-295-91	SHORT	0		
C622	1-126-965-11	ELECT	22uF	20%	50V (US,CND,UK)
C623	1-165-319-11	CERAMIC CHIP	0.1uF		50V (US,CND,UK)
C624	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C625	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C626	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C627	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C628	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C629	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C630	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C631	1-216-295-91	SHORT	0		
C724	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C725	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
		< CONNECTOR >			
CN600	1-568-831-41	SOCKET, CONNECTOR 12P			
CN601	1-770-655-11	CONNECTOR, FFC/FPC 27P			
* CN602	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN603	1-568-832-11	SOCKET, CONNECTOR 13P			
CN604	1-770-638-11	CONNECTOR, FFC/FPC 7P			
		< DIODE >			
D600	8-719-053-18	DIODE 1SR154-400TE-25			
D601	8-719-069-59	DIODE UDZS-TE17-8.2B			
		< IC >			
IC600	8-759-653-03	IC NJM78M05DL1A-TE1			
IC601	8-759-662-86	IC NJM79M05DL1A-TE1			
IC602	8-759-106-22	IC uPD4052BG-T1			
IC603	8-749-923-05	TORX178A (DIGITAL OPTICAL) (US,CND,UK)			
		< JACK >			
J600	1-794-033-11	JACK, PIN (6P)			
J601	1-794-034-11	JACK (SMALL TYPE)			
		< COIL >			
L600	1-469-525-91	INDUCTOR	10uH (US,CND,UK)		
L601	1-412-953-11	INDUCTOR	15uH		
L602	1-412-953-11	INDUCTOR	15uH		
L603	1-412-953-11	INDUCTOR	15uH		
		< TRANSISTOR >			
Q600	8-729-801-93	TRANSISTOR	2SD1387-34-TP		
Q601	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q602	8-729-901-00	TRANSISTOR	DTC124EKA-T146		
Q603	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q604	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q605	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
		< RESISTOR >			
R600	1-216-033-00	METAL CHIP	220	5%	1/10W
R601	1-216-033-00	METAL CHIP	220	5%	1/10W
R602	1-216-033-00	METAL CHIP	220	5%	1/10W
R603	1-216-033-00	METAL CHIP	220	5%	1/10W
R604	1-216-033-00	METAL CHIP	220	5%	1/10W
R605	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R606	1-216-295-91	SHORT	0		
R607	1-216-295-91	SHORT	0		
R610	1-216-025-91	RES-CHIP	100	5%	1/10W
R611	1-216-025-91	RES-CHIP	100	5%	1/10W
R612	1-216-097-91	RES-CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R613	1-216-097-91	RES-CHIP	100K	5%	1/10W
R614	1-216-073-00	METAL CHIP	10K	5%	1/10W
R615	1-216-073-00	METAL CHIP	10K	5%	1/10W
R616	1-216-049-91	RES-CHIP	1K	5%	1/10W
R617	1-216-049-91	RES-CHIP	1K	5%	1/10W
R618	1-216-049-91	RES-CHIP	1K	5%	1/10W
R619	1-216-049-91	RES-CHIP	1K	5%	1/10W
R620	1-216-097-91	RES-CHIP	100K	5%	1/10W
R621	1-216-049-91	RES-CHIP	1K	5%	1/10W
R622	1-216-097-91	RES-CHIP	100K	5%	1/10W
R623	1-216-049-91	RES-CHIP	1K	5%	1/10W
R624	1-216-049-91	RES-CHIP	1K	5%	1/10W
R625	1-216-097-91	RES-CHIP	100K	5%	1/10W
R626	1-216-049-91	RES-CHIP	1K	5%	1/10W
R627	1-216-097-91	RES-CHIP	100K	5%	1/10W
R628	1-216-025-91	RES-CHIP	100	5%	1/10W (US,CND,UK)
R629	1-216-049-91	RES-CHIP	1K	5%	1/10W
R630	1-216-042-00	METAL CHIP	510	5%	1/10W
R631	1-216-049-91	RES-CHIP	1K	5%	1/10W
R632	1-216-042-00	METAL CHIP	510	5%	1/10W
R633	1-216-042-00	METAL CHIP	510	5%	1/10W
R634	1-216-049-91	RES-CHIP	1K	5%	1/10W
R635	1-216-049-91	RES-CHIP	1K	5%	1/10W

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	A-4424-426-A	DVD BOARD, COMPLETE (CND,US)
	A-4424-645-A	DVD BOARD, COMPLETE (AEP,CEN,CEU,UK)
	A-4424-649-A	DVD BOARD, COMPLETE (HK,SP,TW)
	A-4424-651-A	DVD BOARD, COMPLETE (AUS)
	A-4424-838-A	DVD BOARD, COMPLETE (MX)
	A-4424-840-A	DVD BOARD, COMPLETE (RU)
	A-4424-936-A	DVD BOARD, COMPLETE (EA3)
	A-4440-266-A	DVD BOARD, COMPLETE (KR)
	A-4440-353-A	DVD BOARD, COMPLETE (CH)
	A-4473-704-A	DVD BOARD, COMPLETE (E32)
	A-4475-303-A	DVD BOARD, COMPLETE (E12)

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	8-759-567-31	IC PLL1700E/2K (US,CND)

< CAPACITOR >

C001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C002	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C003	1-126-246-11	ELECT CHIP	220uF	20%	4V
C004	1-126-204-11	ELECT CHIP	47uF	20%	16V
C005	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C007	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C008	1-126-204-11	ELECT CHIP	47uF	20%	16V
C009	1-126-204-11	ELECT CHIP	47uF	20%	16V
C010	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C011	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C012	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C013	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C015	1-126-246-11	ELECT CHIP	220uF	20%	4V
C016	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C017	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C018	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C019	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C020	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C021	1-124-778-00	ELECT CHIP	22uF	20%	6.3V (AEP,UK,SP,HK,E32,AUS)
C022	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C024	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C201	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C202	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C203	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C204	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C211	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C213	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C304	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C307	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C309	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C310	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C312	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C313	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C316	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C319	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C321	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C325	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C341	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C401	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C402	1-126-209-11	ELECT CHIP	100uF	20%	4V
C403	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C404	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C406	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C408	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C411	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C414	1-104-851-11	TANTAL. CHIP	10uF	20%	10V

DVD

Ref. No.	Part No.	Description			Remark
C415	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C420	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C422	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C425	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C426	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C428	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C434	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C436	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C438	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C439	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C440	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C441	1-126-209-11	ELECT CHIP	100uF	20%	4V
C443	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C501	1-126-400-11	ELECT	22uF	20%	35V
C502	1-126-400-11	ELECT	22uF	20%	35V
C503	1-126-400-11	ELECT	22uF	20%	35V
C504	1-126-400-11	ELECT	22uF	20%	35V
C505	1-126-400-11	ELECT	22uF	20%	35V
C506	1-126-400-11	ELECT	22uF	20%	35V
C507	1-164-672-11	CERAMIC CHIP	1500PF	5%	16V
C508	1-164-672-11	CERAMIC CHIP	1500PF	5%	16V
C509	1-126-204-11	ELECT CHIP	47uF	20%	16V
C510	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C511	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C512	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C513	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C514	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C515	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C516	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C517	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C518	1-126-204-11	ELECT CHIP	47uF	20%	16V
C519	1-126-204-11	ELECT CHIP	47uF	20%	16V
C520	1-126-400-11	ELECT	22uF	20%	35V
C521	1-126-400-11	ELECT	22uF	20%	35V
C522	1-126-400-11	ELECT	22uF	20%	35V
C523	1-126-400-11	ELECT	22uF	20%	35V
C524	1-126-400-11	ELECT	22uF	20%	35V
C525	1-126-400-11	ELECT	22uF	20%	35V
C526	1-124-779-00	ELECT CHIP	10uF	20%	16V
C527	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C529	1-126-204-11	ELECT CHIP	47uF	20%	16V
C531	1-126-204-11	ELECT CHIP	47uF	20%	16V
C532	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C533	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C534	1-126-204-11	ELECT CHIP	47uF	20%	16V
C535	1-126-204-11	ELECT CHIP	47uF	20%	16V
C536	1-107-826-91	CERAMIC CHIP	0.1uF	10%	10V
C537	1-126-400-11	ELECT	22uF	20%	35V
C538	1-126-400-11	ELECT	22uF	20%	35V
C539	1-126-400-11	ELECT	22uF	20%	35V
C540	1-126-400-11	ELECT	22uF	20%	35V
C541	1-126-400-11	ELECT	22uF	20%	35V
C542	1-126-400-11	ELECT	22uF	20%	35V

Ref. No.	Part No.	Description			Remark
C543	1-162-921-11	CERAMIC CHIP	33PF		
C544	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C548	1-162-921-11	CERAMIC CHIP	33PF		
C549	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C552	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C553	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C554	1-126-204-11	ELECT CHIP	47uF	20%	16V
C555	1-126-204-11	ELECT CHIP	47uF	20%	16V
C556	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C601	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C703	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C704	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C705	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C706	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C707	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C708	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C709	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C710	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C711	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C712	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C713	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C714	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C715	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C717	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C801	1-126-204-11	ELECT CHIP	47uF	20%	16V
C802	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C803	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C805	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C806	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C807	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C808	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C809	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C810	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C811	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C812	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C813	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C814	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C815	1-110-666-11	ELECT CHIP	22uF	20%	6.3V
C818	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C819	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C820	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C821	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C822	1-126-204-11	ELECT CHIP	47uF	20%	16V
C823	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C824	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C825	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C831	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C832	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C833	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C834	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C835	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C836	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C837	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C902	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C903	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C906	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C907	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C909	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C910	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C911	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C912	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C913	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C914	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C915	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C916	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C917	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C918	1-128-390-11	ELECT CHIP	220uF	20%	6.3V
C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-126-209-11	ELECT CHIP	100uF	20%	4V
C921	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C922	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C923	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C924	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C925	1-162-919-91	CERAMIC CHIP	22PF	0.5PF	50V
C926	1-162-924-91	CERAMIC CHIP	56PF	0.5PF	50V
C927	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C928	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C929	1-126-209-11	ELECT CHIP	100uF	20%	4V
C930	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C931	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C932	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C933	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C934	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C935	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C936	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C937	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C938	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C939	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C940	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C941	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C943	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C944	1-128-390-11	ELECT CHIP	220uF	20%	6.3V
C945	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C946	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C947	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C948	1-124-779-00	ELECT CHIP	10uF	20%	16V
C949	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C951	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C952	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C953	1-104-905-11	CAPACITOR	0.22F		5.5V
C954	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C955	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN001	1-794-032-21	PIN, CONNECTOR			
CN002	1-794-343-21	CONNECTOR, FFC/FPC 18P			
CN003	1-794-343-21	CONNECTOR, FFC/FPC 18P			
CN005	1-785-466-11	CONNECTOR, FFC/FPC 7P			
CN006	1-778-622-21	CONNECTOR, FFC/FPC 10P			
* CN010	1-573-768-21	PIN, CONNECTOR (1.5MM) (SMD) 5P			
CN011	1-573-768-61	PIN, CONNECTOR (1.5MM) (SMD) 5P			
CN012	1-573-768-41	PIN, CONNECTOR (1.5MM) (SMD) 5P			
CN014	1-778-622-21	CONNECTOR, FFC/FPC 10P			
CN015	1-794-342-21	CONNECTOR, FFC/FPC 14P			
CN016	1-778-622-21	CONNECTOR, FFC/FPC 10P			
CN017	1-794-341-21	CONNECTOR, FFC/FPC 27P			
CN018	1-784-365-21	CONNECTOR, FFC/FPC 5P			
CN019	1-794-343-21	CONNECTOR, FFC/FPC 18P			
		< DIODE >			
D701	8-719-073-01	DIODE MA111-(K8).S0			
D801	8-719-941-09	DIODE DAP202UT106			
D802	8-719-404-50	DIODE MA111-TX			
D803	8-719-941-21	DIODE DAP202UT106			
D804	8-719-941-21	DIODE DAN202UT106			
D805	8-719-941-21	DIODE DAN202UT106			
D806	8-719-404-50	DIODE MA111-TX			
D807	8-719-404-50	DIODE MA111-TX			
D901	8-719-053-18	DIODE 1SR154-400TE-25			
D902	8-719-053-18	DIODE 1SR154-400TE-25			
D903	8-719-404-50	DIODE MA111-TX			
D904	8-719-404-50	DIODE MA111-TX			
D905	8-719-404-50	DIODE MA111-TX			
D906	8-719-404-50	DIODE MA111-TX			
D907	8-719-404-50	DIODE MA111-TX			
D908	8-719-404-50	DIODE MA111-TX			
D909	8-719-404-50	DIODE MA111-TX			
D910	8-719-404-50	DIODE MA111-TX			
D911	8-719-941-21	DIODE DAP202UT106			
D912	8-719-941-21	DIODE DAP202UT106			
D913	8-719-941-21	DIODE DAP202UT106			
D914	8-719-941-21	DIODE DAP202UT106			
		< FERRITE BEAD >			
FB001	1-469-669-21	INDUCTOR	0UH		
FB002	1-469-669-21	INDUCTOR	0UH		
FB003	1-469-669-21	INDUCTOR	0UH		
FB004	1-469-669-21	INDUCTOR	0UH		
FB005	1-469-669-21	INDUCTOR	0UH		
FB006	1-469-669-21	INDUCTOR	0UH		
FB007	1-469-669-21	INDUCTOR	0UH		
FB008	1-469-669-21	INDUCTOR	0UH		
FB016	1-216-801-11	METAL CHIP	22	5%	1/16W
* FB014	1-469-229-22	FERRITE	0UH		
* FB015	1-469-229-22	FERRITE	0UH		
* FB017	1-469-229-22	FERRITE	0UH		
* FB018	1-469-229-22	FERRITE	0UH		
FB019	1-469-669-21	INDUCTOR	0UH		
FB020	1-469-669-21	INDUCTOR	0UH		
FB021	1-469-669-21	INDUCTOR	0UH		

DVD

Ref. No.	Part No.	Description			Remark
FB022	1-469-669-21	INDUCTOR	0UH		
FB023	1-500-283-11	INDUCTOR CHIP	0UH		
FB024	1-469-669-21	INDUCTOR	0UH		
FB025	1-469-669-21	INDUCTOR	0UH		
FB026	1-469-669-21	INDUCTOR	0UH		
FB027	1-469-669-21	INDUCTOR	0UH		
FB031	1-469-669-21	INDUCTOR	0UH (AEP,UK,SP,HK,E32,AUS)		
FB055	1-500-283-11	INDUCTOR CHIP	0UH		
FB056	1-500-283-11	INDUCTOR CHIP	0UH		
FB058	1-500-283-11	INDUCTOR CHIP	0UH		
FB060	1-500-283-11	INDUCTOR CHIP	0UH		
FB081	1-216-801-11	METAL CHIP	22	5%	1/16W
FB083	1-216-801-11	METAL CHIP	22	5%	1/16W
FB084	1-216-801-11	METAL CHIP	22	5%	1/16W
FB085	1-216-801-11	METAL CHIP	22	5%	1/16W
FB087	1-216-801-11	METAL CHIP	22	5%	1/16W
FB105	1-469-669-21	INDUCTOR	0UH		
FB106	1-469-669-21	INDUCTOR	0UH		
FB901	1-469-669-21	INDUCTOR	0UH		
* FB902	1-469-229-22	FERRITE	0UH		
* FB903	1-469-229-22	FERRITE	0UH		
* FB904	1-469-229-22	FERRITE	0UH		
* FB905	1-469-229-22	FERRITE	0UH		
* FB906	1-469-229-22	FERRITE	0UH		
* FB907	1-469-229-22	FERRITE	0UH		
* FB908	1-469-229-22	FERRITE	0UH		
* FB909	1-469-229-22	FERRITE	0UH		
FB916	1-500-283-11	INDUCTOR CHIP	0UH		
* FB910	1-469-229-22	FERRITE	0UH		
* FB911	1-469-229-22	FERRITE	0UH		
* FB912	1-469-229-22	FERRITE	0UH		
* FB915	1-469-229-22	FERRITE	0UH		
FB917	1-500-283-11	INDUCTOR CHIP	0UH		
* FB919	1-469-229-22	FERRITE	0UH		
* FB925	1-469-229-22	FERRITE	0UH		
* FB920	1-469-229-22	FERRITE	0UH		
* FB921	1-469-229-22	FERRITE	0UH		
* FB922	1-469-229-22	FERRITE	0UH		
* FB923	1-469-229-22	FERRITE	0UH		
* FB924	1-469-229-22	FERRITE	0UH		
* FB926	1-469-229-22	FERRITE	0UH		
* FB927	1-469-229-22	FERRITE	0UH		
* FB928	1-469-229-22	FERRITE	0UH		
* FB929	1-469-229-22	FERRITE	0UH		
* FB930	1-469-229-22	FERRITE	0UH		
* FB931	1-469-229-22	FERRITE	0UH		
* FB932	1-469-229-22	FERRITE	0UH		
* FB934	1-469-229-22	FERRITE	0UH		
* FB936	1-469-229-22	FERRITE	0UH		
* FB937	1-469-229-22	FERRITE	0UH		
* FB938	1-469-229-22	FERRITE	0UH		
* FB939	1-469-229-22	FERRITE	0UH		
* FB942	1-469-229-22	FERRITE	0UH		
* FB944	1-469-229-22	FERRITE	0UH		
* FB940	1-469-229-22	FERRITE	0UH		
* FB941	1-469-229-22	FERRITE	0UH		
* FB943	1-469-229-22	FERRITE	0UH		
FB945	1-469-669-21	INDUCTOR	0UH		

Ref. No.	Part No.	Description		Remark
FB946	1-469-669-21	INDUCTOR	0UH	
* FB947	1-469-229-22	FERRITE	0UH	
* FB948	1-469-229-22	FERRITE	0UH	
* FB949	1-469-229-22	FERRITE	0UH	
FB956	1-469-669-21	INDUCTOR	0UH	
* FB957	1-469-229-22	FERRITE	0UH	
* FB958	1-469-229-22	FERRITE	0UH	
* FB959	1-469-229-22	FERRITE	0UH	
* FB960	1-469-229-22	FERRITE	0UH	
* FB961	1-469-229-22	FERRITE	0UH	
* FB962	1-469-229-22	FERRITE	0UH	
* FB963	1-469-229-22	FERRITE	0UH	
* FB964	1-469-229-22	FERRITE	0UH	
* FB965	1-469-229-22	FERRITE	0UH	
* FB966	1-469-229-22	FERRITE	0UH	
FB967	1-469-669-21	INDUCTOR	0UH	
FB969	1-469-669-21	INDUCTOR	0UH	
		< FILTER >		
FL008	1-234-177-21	FILTER, CHIP EMI		
FL001	1-234-177-21	FILTER, CHIP EMI		
FL002	1-234-177-21	FILTER, CHIP EMI		
FL003	1-233-893-21	FILTER, CHIP EMI		
FL004	1-233-893-21	FILTER, CHIP EMI		
FL005	1-234-177-21	FILTER, CHIP EMI		
FL006	1-234-177-21	FILTER, CHIP EMI		
FL007	1-233-893-21	FILTER, CHIP EMI		
FL009	1-234-177-21	FILTER, CHIP EMI		
FL010	1-234-177-21	FILTER, CHIP EMI		
FL011	1-234-177-21	FILTER, CHIP EMI	(US,CND)	
FL012	1-233-893-21	FILTER, CHIP EMI		
FL013	1-233-893-21	FILTER, CHIP EMI	(US,CND)	
FL014	1-234-177-21	FILTER, CHIP EMI		
FL015	1-234-177-21	FILTER, CHIP EMI		
FL016	1-234-177-21	FILTER, CHIP EMI		
FL017	1-234-177-21	FILTER, CHIP EMI		
FL202	1-234-177-21	FILTER, CHIP EMI		
FL203	1-234-177-21	FILTER, CHIP EMI		
FL204	1-234-177-21	FILTER, CHIP EMI		
FL205	1-234-177-21	FILTER, CHIP EMI		
FL301	1-234-177-21	FILTER, CHIP EMI		
FL302	1-234-177-21	FILTER, CHIP EMI		
FL303	1-234-177-21	FILTER, CHIP EMI		
FL401	1-234-177-21	FILTER, CHIP EMI		
FL402	1-234-177-21	FILTER, CHIP EMI		
FL403	1-234-177-21	FILTER, CHIP EMI		
FL404	1-234-177-21	FILTER, CHIP EMI		
FL405	1-234-177-21	FILTER, CHIP EMI		
FL601	1-234-177-21	FILTER, CHIP EMI		
FL602	1-234-177-21	FILTER, CHIP EMI		
FL701	1-234-177-21	FILTER, CHIP EMI		
FL901	1-234-177-21	FILTER, CHIP EMI		
FL903	1-234-177-21	FILTER, CHIP EMI		
FL904	1-234-177-21	FILTER, CHIP EMI		
FL905	1-234-177-21	FILTER, CHIP EMI		
FL902	1-234-177-21	FILTER, CHIP EMI		

Ref. No.	Part No.	Description	Remark
		< IC >	
IC001	8-759-594-91	IC SM8701AM-E2	
IC004	8-759-531-92	IC TC7WH04FU(TE12R)	
IC002	8-759-052-52	IC L78M05TLL-SONY-TL	
IC005	8-759-486-55	IC NJM2370U33-TE2	
IC202	8-759-599-39	IC MB91101APFV-G-BND	
IC201	8-759-469-25	IC AK6440AF-E2	
IC203	8-759-645-76	IC TC74VHCT32AFT	
IC204	8-759-573-65	IC KM616V1002AT-15T	
IC206	8-759-687-50	IC MR27V1602D-E8MAZ060 (US,CND,AUS)	
IC206	8-759-687-52	IC MR27V1602D-F0MAZ060 (AEP,UK,CEN,CEU)	
IC206	8-759-697-51	IC MR27V1602E-10MAZH60 (SP,HK,TW,E12,KR)	
IC206	8-759-712-18	IC MR27V1602E-E8MAZ060 (MX,RU,EA3,E32) (IC206 is repair parts of IC205)	
IC207	8-759-427-92	IC PST9126NL	
IC302	8-759-486-55	IC NJM2370U33-TE2	
IC303	8-759-567-27	IC CXD8784R	
IC304	8-759-583-44	IC MSM51V18160D-60TSKR1	
IC401	8-752-398-60	IC CXD1930BQ	
IC402	8-759-641-60	IC MT48LC1M16A1TG-7S	
IC403	8-759-641-60	IC MT48LC1M16A1TG-7S	
IC404	8-759-486-55	IC NJM2370U33-TE2	
IC501	8-759-052-52	IC L78M05TLL-SONY-TL	
IC502	8-759-636-55	IC M5218AFP-T1	
IC503	8-759-636-55	IC M5218AFP-T1	
IC504	8-759-636-55	IC M5218AFP-T1	
IC505	8-759-636-55	IC M5218AFP-T1	
IC506	8-759-636-55	IC M5218AFP-T1	
IC507	8-759-658-33	IC TC9482F	
IC508	8-759-636-55	IC M5218AFP-T1	
IC509	8-759-636-55	IC M5218AFP-T1	
IC510	8-759-636-55	IC M5218AFP-T1	
IC511	8-759-636-55	IC M5218AFP-T1	
IC512	8-759-636-55	IC M5218AFP-T1	
IC513	8-759-636-55	IC M5218AFP-T1	
IC601	8-759-567-30	IC CXD8788Q	
IC701	8-759-598-87	IC CXD8791AQ	
IC702	8-759-337-40	IC NJM2904V(TE2)	
IC801	8-759-522-13	IC BA5981FP-E2	
IC802	8-759-567-26	IC BA5983FP-E2	
IC803	8-759-338-78	IC BA10324AFV-E2	
IC901	8-759-342-94	IC IDT71256SA20Y-TL	
IC902	8-759-557-35	IC M51943BML-600C	
IC903	8-759-660-31	IC M30622MA-A33FP	
IC904	8-759-643-42	IC CXD9511AQ	
IC905	8-759-460-72	IC BA033FP-E2	
IC906	8-759-657-47	IC AK4527	
IC907	8-759-639-35	IC LC89055W-RA8	
IC908	8-759-497-44	IC TC7WH125FU(TE12R)	
		< COIL >	
L001	1-414-754-11	INDUCTOR 10uH	
L402	1-414-754-11	INDUCTOR 10uH	
L901	1-414-754-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q501	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q502	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q503	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q504	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q505	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q506	8-729-046-97	TRANSISTOR 2SD1938(F)-T(TX).SO	
Q801	8-729-028-73	TRANSISTOR DTA114EUA-T106	
Q901	8-729-230-63	TRANSISTOR 2SD1819A-QRS-TX	
Q902	8-729-028-96	TRANSISTOR DTC114EUA-T106	
Q903	8-729-230-63	TRANSISTOR 2SD1819A-QRS-TX	
Q905	8-729-907-00	TRANSISTOR DTC114EUA-T106	
Q906	8-729-028-73	TRANSISTOR DTA114EUA-T106	
Q907	8-729-028-73	TRANSISTOR DTA114EUA-T106	
Q908	8-729-028-73	TRANSISTOR DTA114EUA-T106	
Q909	8-729-028-73	TRANSISTOR DTA114EUA-T106	
Q910	8-729-028-73	TRANSISTOR DTA114EUA-T106	
		< RESISTOR >	
R001	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R002	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R003	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R004	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R005	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R006	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R007	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R009	1-216-864-11	METAL CHIP 0 5% 1/16W	
R011	1-216-829-11	METAL CHIP 47K 5% 1/16W	
R012	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R014	1-216-824-11	METAL CHIP 47K 5% 1/16W	
R035	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R036	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R037	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R039	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R041	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R042	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R044	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R045	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R048	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R049	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R050	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R053	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R201	1-216-833-91	RES-CHIP 10K 5% 1/16W (US,CND)	
R202	1-216-801-11	METAL CHIP 22 5% 1/16W	
R203	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R204	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R205	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R206	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R207	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R212	1-216-864-11	METAL CHIP 0 5% 1/16W	
R213	1-216-801-11	METAL CHIP 22 5% 1/16W	
R217	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R222	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R223	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R225	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R227	1-216-813-11	METAL CHIP 220 5% 1/16W	
R228	1-216-813-11	METAL CHIP 220 5% 1/16W	
R229	1-216-813-11	METAL CHIP 220 5% 1/16W	
R230	1-216-813-11	METAL CHIP 220 5% 1/16W	

DVD

Ref. No.	Part No.	Description			Remark
R240	1-216-246-00	RES-CHIP	100K	5%	1/8W
R241	1-216-238-91	RES-CHIP	47K	5%	1/8W
R242	1-216-833-91	RES-CHIP	10K	5%	1/16W
R243	1-216-833-91	RES-CHIP	10K	5%	1/16W
R244	1-216-833-91	RES-CHIP	10K	5%	1/16W
R305	1-218-879-11	METAL CHIP	22K	0.5%	1/16W
R306	1-218-831-11	METAL CHIP	220	0.5%	1/16W
R307	1-218-883-11	METAL CHIP	33K	0.5%	1/16W
R308	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R309	1-216-838-11	METAL CHIP	27K	5%	1/16W
R310	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R313	1-216-833-91	RES-CHIP	10K	5%	1/16W
R314	1-216-833-91	RES-CHIP	10K	5%	1/16W
R315	1-216-833-91	RES-CHIP	10K	5%	1/16W
R316	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R317	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R318	1-216-849-11	METAL CHIP	220K	5%	1/16W
R319	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R320	1-218-853-11	METAL CHIP	1.8K	0.5%	1/16W
R321	1-218-847-11	METAL CHIP	1K	0.5%	1/16W
R322	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R323	1-216-833-91	RES-CHIP	10K	5%	1/16W
R324	1-216-833-91	RES-CHIP	10K	5%	1/16W
R325	1-216-833-91	RES-CHIP	10K	5%	1/16W
R326	1-216-833-91	RES-CHIP	10K	5%	1/16W
R327	1-216-833-91	RES-CHIP	10K	5%	1/16W
R328	1-216-833-91	RES-CHIP	10K	5%	1/16W
R329	1-216-833-91	RES-CHIP	10K	5%	1/16W
R330	1-216-833-91	RES-CHIP	10K	5%	1/16W
R331	1-216-833-91	RES-CHIP	10K	5%	1/16W
R332	1-216-833-91	RES-CHIP	10K	5%	1/16W
R337	1-216-809-11	METAL CHIP	100	5%	1/16W
R338	1-216-833-91	RES-CHIP	10K	5%	1/16W
R339	1-216-833-91	RES-CHIP	10K	5%	1/16W
R340	1-216-833-91	RES-CHIP	10K	5%	1/16W
R341	1-216-809-11	METAL CHIP	100	5%	1/16W
R403	1-216-833-91	RES-CHIP	10K	5%	1/16W
R404	1-216-864-11	METAL CHIP	0	5%	1/16W
R405	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R406	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R407	1-216-833-91	RES-CHIP	10K	5%	1/16W
R409	1-216-864-11	METAL CHIP	0	5%	1/16W
R410	1-216-821-11	METAL CHIP	1K	5%	1/16W
R411	1-216-833-91	RES-CHIP	10K	5%	1/16W
R413	1-216-864-11	METAL CHIP	0	5%	1/16W
R426	1-216-813-11	METAL CHIP	220	5%	1/16W
R427	1-216-813-11	METAL CHIP	220	5%	1/16W
R428	1-216-813-11	METAL CHIP	220	5%	1/16W
R429	1-216-813-11	METAL CHIP	220	5%	1/16W
R430	1-216-813-11	METAL CHIP	220	5%	1/16W
R431	1-216-813-11	METAL CHIP	220	5%	1/16W
R501	1-216-815-11	METAL CHIP	330	5%	1/16W
R502	1-216-815-11	METAL CHIP	330	5%	1/16W
R503	1-216-815-11	METAL CHIP	330	5%	1/16W
R504	1-216-815-11	METAL CHIP	330	5%	1/16W
R505	1-216-833-91	RES-CHIP	10K	5%	1/16W
R506	1-216-833-91	RES-CHIP	10K	5%	1/16W
R507	1-216-833-91	RES-CHIP	10K	5%	1/16W
R508	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R509	1-216-833-91	RES-CHIP	10K	5%	1/16W
R510	1-216-833-91	RES-CHIP	10K	5%	1/16W
R511	1-216-833-91	RES-CHIP	10K	5%	1/16W
R512	1-216-833-91	RES-CHIP	10K	5%	1/16W
R513	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R514	1-216-833-91	RES-CHIP	10K	5%	1/16W
R515	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R516	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R517	1-216-833-91	RES-CHIP	10K	5%	1/16W
R518	1-216-833-91	RES-CHIP	10K	5%	1/16W
R519	1-216-833-91	RES-CHIP	10K	5%	1/16W
R520	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R521	1-216-833-91	RES-CHIP	10K	5%	1/16W
R522	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R523	1-216-833-91	RES-CHIP	10K	5%	1/16W
R524	1-216-833-91	RES-CHIP	10K	5%	1/16W
R525	1-216-839-11	METAL CHIP	33K	5%	1/16W
R526	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R527	1-216-833-91	RES-CHIP	10K	5%	1/16W
R528	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R529	1-216-295-91	SHORT	0		
R530	1-216-295-91	SHORT	0		
R531	1-216-833-91	RES-CHIP	10K	5%	1/16W
R532	1-216-833-91	RES-CHIP	10K	5%	1/16W
R535	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R541	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
R543	1-216-845-11	METAL CHIP	100K	5%	1/16W
R544	1-216-845-11	METAL CHIP	100K	5%	1/16W
R545	1-216-845-11	METAL CHIP	100K	5%	1/16W
R546	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R547	1-216-295-91	SHORT	0		
R548	1-216-295-91	SHORT	0		
R549	1-216-864-11	METAL CHIP	0	5%	1/16W
R550	1-216-864-11	METAL CHIP	0	5%	1/16W
R551	1-216-833-91	RES-CHIP	10K	5%	1/16W
R552	1-216-833-91	RES-CHIP	10K	5%	1/16W
R553	1-216-295-91	SHORT	0		
R554	1-216-833-91	RES-CHIP	10K	5%	1/16W
R555	1-216-833-91	RES-CHIP	10K	5%	1/16W
R556	1-216-821-11	METAL CHIP	1K	5%	1/16W
R557	1-216-821-11	METAL CHIP	1K	5%	1/16W
R558	1-216-821-11	METAL CHIP	1K	5%	1/16W
R559	1-216-821-11	METAL CHIP	1K	5%	1/16W
R560	1-216-821-11	METAL CHIP	1K	5%	1/16W
R561	1-216-821-11	METAL CHIP	1K	5%	1/16W
R562	1-216-833-91	RES-CHIP	10K	5%	1/16W
R563	1-216-833-91	RES-CHIP	10K	5%	1/16W
R564	1-216-833-91	RES-CHIP	10K	5%	1/16W
R565	1-216-833-91	RES-CHIP	10K	5%	1/16W
R566	1-216-833-91	RES-CHIP	10K	5%	1/16W
R567	1-216-833-91	RES-CHIP	10K	5%	1/16W
R568	1-216-849-11	METAL CHIP	220K	5%	1/16W
R569	1-216-849-11	METAL CHIP	220K	5%	1/16W
R570	1-216-849-11	METAL CHIP	220K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R571	1-216-849-11	METAL CHIP	220K	5%	1/16W
R572	1-216-849-11	METAL CHIP	220K	5%	1/16W
R573	1-216-849-11	METAL CHIP	220K	5%	1/16W
R574	1-216-821-11	METAL CHIP	1K	5%	1/16W
R575	1-216-833-91	RES-CHIP	10K	5%	1/16W
R576	1-216-835-11	RES-CHIP	15K	5%	1/16W
R577	1-216-821-11	METAL CHIP	1K	5%	1/16W
R578	1-216-845-11	METAL CHIP	100K	5%	1/16W
R579	1-216-845-11	METAL CHIP	100K	5%	1/16W
R580	1-216-845-11	METAL CHIP	100K	5%	1/16W
R581	1-216-833-91	RES-CHIP	10K	5%	1/16W
R581	1-216-833-91	RES-CHIP	10K	5%	1/16W
R584	1-216-864-11	METAL CHIP	0	5%	1/16W
R585	1-216-845-11	METAL CHIP	100K	5%	1/16W
R587	1-216-864-11	METAL CHIP	0	5%	1/16W
R588	1-216-845-11	METAL CHIP	100K	5%	1/16W
R590	1-216-864-11	METAL CHIP	0	5%	1/16W
R591	1-216-845-11	METAL CHIP	100K	5%	1/16W
R592	1-216-833-91	RES-CHIP	10K	5%	1/16W
R593	1-216-833-91	RES-CHIP	10K	5%	1/16W
R594	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R595	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R596	1-218-272-11	RES-CHIP	5.1K	5%	1/16W
R597	1-216-864-11	METAL CHIP	0	5%	1/16W
R599	1-216-864-11	METAL CHIP	0	5%	1/16W
R601	1-216-833-91	RES-CHIP	10K	5%	1/16W
R602	1-216-833-91	RES-CHIP	10K	5%	1/16W
R604	1-216-833-91	RES-CHIP	10K	5%	1/16W
R605	1-216-833-91	RES-CHIP	10K	5%	1/16W
R606	1-216-833-91	RES-CHIP	10K	5%	1/16W
R607	1-220-151-11	RES-CHIP	51	5%	1/16W
R630	1-216-833-91	RES-CHIP	10K	5%	1/16W
R631	1-216-833-91	RES-CHIP	10K	5%	1/16W
R632	1-216-833-91	RES-CHIP	10K	5%	1/16W
R633	1-216-833-91	RES-CHIP	10K	5%	1/16W
R634	1-216-833-91	RES-CHIP	10K	5%	1/16W
R635	1-216-833-91	RES-CHIP	10K	5%	1/16W
R636	1-216-815-11	METAL CHIP	330	5%	1/16W
R637	1-216-809-11	METAL CHIP	100	5%	1/16W
R642	1-216-809-11	METAL CHIP	100	5%	1/16W
R643	1-216-815-11	METAL CHIP	330	5%	1/16W
R647	1-216-833-91	RES-CHIP	10K	5%	1/16W
R701	1-216-805-11	METAL CHIP	47	5%	1/16W
R702	1-216-817-11	METAL CHIP	470	5%	1/16W
R703	1-216-817-11	METAL CHIP	470	5%	1/16W
R704	1-216-817-11	METAL CHIP	470	5%	1/16W
R705	1-216-817-11	METAL CHIP	470	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-844-11	METAL CHIP	82K	5%	1/16W
R708	1-216-844-11	METAL CHIP	82K	5%	1/16W
R709	1-216-844-11	METAL CHIP	82K	5%	1/16W
R710	1-216-844-11	METAL CHIP	82K	5%	1/16W
R711	1-216-833-91	RES-CHIP	10K	5%	1/16W
R712	1-216-839-11	METAL CHIP	33K	5%	1/16W
R720	1-216-821-11	METAL CHIP	1K	5%	1/16W
R721	1-216-821-11	METAL CHIP	1K	5%	1/16W
R722	1-216-801-11	METAL CHIP	22	5%	1/16W

Ref. No.	Part No.	Description			Remark
R748	1-216-833-91	RES-CHIP	10K	5%	1/16W
R751	1-216-821-11	METAL CHIP	1K	5%	1/16W
R752	1-216-821-11	METAL CHIP	1K	5%	1/16W
R755	1-216-833-91	RES-CHIP	10K	5%	1/16W
R757	1-216-864-11	METAL CHIP	0	5%	1/16W
R758	1-216-864-11	METAL CHIP	0	5%	1/16W
R801	1-216-841-11	METAL CHIP	47K	5%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W
R803	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-841-11	METAL CHIP	47K	5%	1/16W
R805	1-216-840-11	METAL CHIP	39K	5%	1/16W
R806	1-216-840-11	METAL CHIP	39K	5%	1/16W
R807	1-216-835-11	METAL CHIP	15K	5%	1/16W
R808	1-216-835-11	METAL CHIP	15K	5%	1/16W
R809	1-216-844-11	METAL CHIP	82K	5%	1/16W
R810	1-216-844-11	METAL CHIP	82K	5%	1/16W
R811	1-218-907-11	METAL CHIP	330K	0.5%	1/16W
R812	1-218-897-11	METAL CHIP	120K	0.5%	1/16W
R813	1-218-897-11	METAL CHIP	120K	0.5%	1/16W
R814	1-218-907-11	METAL CHIP	330K	0.5%	1/16W
R815	1-216-836-11	METAL CHIP	18K	5%	1/16W
R816	1-216-845-11	METAL CHIP	100K	5%	1/16W
R817	1-216-852-11	METAL CHIP	390K	5%	1/16W
R818	1-216-852-11	METAL CHIP	390K	5%	1/16W
R819	1-216-849-11	METAL CHIP	220K	5%	1/16W
R820	1-216-851-11	METAL CHIP	330K	5%	1/16W
R821	1-216-840-11	METAL CHIP	39K	5%	1/16W
R822	1-216-845-11	METAL CHIP	100K	5%	1/16W
R823	1-216-833-91	RES-CHIP	10K	5%	1/16W
R824	1-216-833-91	RES-CHIP	10K	5%	1/16W
R825	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R831	1-216-833-91	RES-CHIP	10K	5%	1/16W
R832	1-216-833-91	RES-CHIP	10K	5%	1/16W
R834	1-216-847-11	METAL CHIP	150K	5%	1/16W
R835	1-216-847-11	METAL CHIP	150K	5%	1/16W
R836	1-216-847-11	METAL CHIP	150K	5%	1/16W
R837	1-216-844-11	METAL CHIP	82K	5%	1/16W
R838	1-216-848-11	METAL CHIP	180K	5%	1/16W
R839	1-216-848-11	METAL CHIP	180K	5%	1/16W
R840	1-216-848-11	METAL CHIP	180K	5%	1/16W
R841	1-216-843-11	METAL CHIP	68K	5%	1/16W
R842	1-216-844-11	METAL CHIP	82K	5%	1/16W
R843	1-216-844-11	METAL CHIP	82K	5%	1/16W
R844	1-216-843-11	METAL CHIP	68K	5%	1/16W
R845	1-216-843-11	METAL CHIP	68K	5%	1/16W
R846	1-216-841-11	METAL CHIP	47K	5%	1/16W
R847	1-216-296-91	SHORT	0		
R851	1-216-833-91	RES-CHIP	10K	5%	1/16W
R852	1-216-833-91	RES-CHIP	10K	5%	1/16W
R853	1-216-833-91	RES-CHIP	10K	5%	1/16W
R854	1-216-833-91	RES-CHIP	10K	5%	1/16W
R855	1-216-834-11	METAL CHIP	12K	5%	1/16W
R856	1-216-836-11	METAL CHIP	18K	5%	1/16W
R857	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
R858	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
R859	1-218-889-11	METAL CHIP	56K	0.5%	1/16W
R860	1-218-889-11	METAL CHIP	56K	0.5%	1/16W
R861	1-216-296-91	SHORT	0		

DVD

Ref. No.	Part No.	Description			Remark
R864	1-216-138-00	METAL CHIP	3.3	5%	1/8W
R865	1-216-833-91	RES-CHIP	10K	5%	1/16W
R866	1-216-833-91	RES-CHIP	10K	5%	1/16W
R867	1-216-833-91	RES-CHIP	10K	5%	1/16W
R868	1-216-833-91	RES-CHIP	10K	5%	1/16W
R869	1-216-833-91	RES-CHIP	10K	5%	1/16W
R870	1-216-815-11	METAL CHIP	330	5%	1/16W
R871	1-216-817-11	METAL CHIP	470	5%	1/16W
R872	1-216-815-11	METAL CHIP	330	5%	1/16W
R873	1-216-821-11	METAL CHIP	1K	5%	1/16W
R901	1-216-833-91	RES-CHIP	10K	5%	1/16W
R902	1-216-813-11	METAL CHIP	220	5%	1/16W
R910	1-216-813-11	METAL CHIP	220	5%	1/16W
R911	1-216-813-11	METAL CHIP	220	5%	1/16W
R912	1-216-813-11	METAL CHIP	220	5%	1/16W
R914	1-216-833-91	RES-CHIP	10K	5%	1/16W
R915	1-216-841-11	METAL CHIP	47K	5%	1/16W
R916	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R917	1-216-841-11	METAL CHIP	47K	5%	1/16W
R918	1-216-174-00	RES-CHIP	100	5%	1/8W
R919	1-216-813-11	METAL CHIP	220	5%	1/16W
R920	1-216-833-91	RES-CHIP	10K	5%	1/16W
R921	1-216-833-91	RES-CHIP	10K	5%	1/16W
R922	1-216-833-91	RES-CHIP	10K	5%	1/16W
R923	1-216-833-91	RES-CHIP	10K	5%	1/16W
R924	1-216-833-91	RES-CHIP	10K	5%	1/16W
R925	1-216-833-91	RES-CHIP	10K	5%	1/16W
R926	1-216-833-91	RES-CHIP	10K	5%	1/16W
R927	1-216-821-11	METAL CHIP	1K	5%	1/16W
R928	1-216-833-91	RES-CHIP	10K	5%	1/16W
R929	1-216-833-91	RES-CHIP	10K	5%	1/16W
R933	1-216-833-91	RES-CHIP	10K	5%	1/16W
R934	1-216-833-91	RES-CHIP	10K	5%	1/16W
R935	1-216-833-91	RES-CHIP	10K	5%	1/16W
R936	1-216-813-11	METAL CHIP	220	5%	1/16W
R937	1-216-833-91	RES-CHIP	10K	5%	1/16W
R938	1-216-821-11	METAL CHIP	1K	5%	1/16W
R940	1-216-821-11	METAL CHIP	1K	5%	1/16W
R942	1-216-833-91	RES-CHIP	10K	5%	1/16W
R943	1-216-833-91	RES-CHIP	10K	5%	1/16W
R944	1-216-833-91	RES-CHIP	10K	5%	1/16W
R945	1-216-821-11	METAL CHIP	1K	5%	1/16W
R946	1-216-857-11	METAL CHIP	1M	5%	1/16W
R947	1-216-809-11	METAL CHIP	100	5%	1/16W
R948	1-216-821-11	METAL CHIP	1K	5%	1/16W
R949	1-216-809-11	METAL CHIP	100	5%	1/16W
R950	1-216-809-11	METAL CHIP	100	5%	1/16W
R951	1-216-809-11	METAL CHIP	100	5%	1/16W
R952	1-216-809-11	METAL CHIP	100	5%	1/16W
R953	1-216-833-91	RES-CHIP	10K	5%	1/16W
R954	1-216-815-11	METAL CHIP	330	5%	1/16W
R955	1-216-821-11	METAL CHIP	1K	5%	1/16W
R956	1-216-821-11	METAL CHIP	1K	5%	1/16W
R957	1-216-818-11	METAL CHIP	560	5%	1/16W
R959	1-216-833-91	RES-CHIP	10K	5%	1/16W
R960	1-216-809-11	METAL CHIP	100	5%	1/16W
R961	1-216-833-91	RES-CHIP	10K	5%	1/16W
R962	1-216-821-11	METAL CHIP	1K	5%	1/16W
R963	1-218-285-11	RES-CHIP	75	5%	1/16W
R964	1-218-272-11	RES-CHIP	5.1K	5%	1/16W
R965	1-218-272-11	RES-CHIP	5.1K	5%	1/16W
R966	1-216-815-11	METAL CHIP	330	5%	1/16W
R967	1-216-815-11	METAL CHIP	330	5%	1/16W
R968	1-216-815-11	METAL CHIP	330	5%	1/16W
R969	1-216-815-11	METAL CHIP	330	5%	1/16W
R970	1-216-815-11	METAL CHIP	330	5%	1/16W
R971	1-216-815-11	METAL CHIP	330	5%	1/16W
R972	1-216-815-11	METAL CHIP	330	5%	1/16W
R973	1-216-815-11	METAL CHIP	330	5%	1/16W
R974	1-216-815-11	METAL CHIP	330	5%	1/16W
R975	1-216-833-91	RES-CHIP	10K	5%	1/16W
R976	1-216-833-91	RES-CHIP	10K	5%	1/16W
R977	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R978	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R979	1-216-821-11	METAL CHIP	1K	5%	1/16W
R982	1-216-864-11	METAL CHIP	0	5%	1/16W
R983	1-216-821-11	METAL CHIP	1K	5%	1/16W
R984	1-216-809-11	METAL CHIP	100	5%	1/16W
R985	1-216-821-11	METAL CHIP	1K	5%	1/16W
R986	1-216-833-91	RES-CHIP	10K	5%	1/16W
R987	1-216-821-11	METAL CHIP	1K	5%	1/16W
R988	1-216-809-11	METAL CHIP	100	5%	1/16W
R989	1-216-845-11	METAL CHIP	100K	5%	1/16W
R990	1-216-821-11	METAL CHIP	1K	5%	1/16W
R991	1-216-833-91	RES-CHIP	10K	5%	1/16W
R992	1-216-833-91	RES-CHIP	10K	5%	1/16W
R994	1-216-833-91	RES-CHIP	10K	5%	1/16W
R995	1-216-833-91	RES-CHIP	10K	5%	1/16W
R997	1-216-833-91	RES-CHIP	10K	5%	1/16W
R999	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1000	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1001	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1002	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1003	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1004	1-216-833-91	RES-CHIP	10K	5%	1/16W
R1005	1-216-833-91	RES-CHIP	10K	5%	1/16W
R1006	1-216-295-91	SHORT	0		
R1009	1-216-809-11	METAL CHIP	100	5%	1/16W
R1010	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1011	1-216-833-91	RES-CHIP	10K	5%	1/16W
R1012	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1037	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1045	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1053	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1054	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1056	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1057	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1058	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1062	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1068	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1509	1-216-815-11	METAL CHIP	330	5%	1/16W
R1510	1-216-815-11	METAL CHIP	330	5%	1/16W
R1511	1-216-815-11	METAL CHIP	330	5%	1/16W
R1514	1-216-844-11	METAL CHIP	82K	5%	1/16W
R1502	1-216-849-11	METAL CHIP	220K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1503	1-216-864-11	METAL CHIP	0	5%	1/16W
R1504	1-216-815-11	METAL CHIP	330	5%	1/16W
R1505	1-216-815-11	METAL CHIP	330	5%	1/16W
R1506	1-216-815-11	METAL CHIP	330	5%	1/16W
R1507	1-216-815-11	METAL CHIP	330	5%	1/16W
R1508	1-216-815-11	METAL CHIP	330	5%	1/16W
R1512	1-216-833-91	RES-CHIP	10K	5%	1/16W
R1513	1-216-833-91	RES-CHIP	10K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
* RB001	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB203	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB201	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB202	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB204	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB402	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB601	1-233-270-11	NETWORK, RES (8 GANG) 10K			
		< VARIABLE RESISTOR >			
RV401	1-223-583-11	RES, ADJ, CARBON 1K			
		< VIBRATOR >			
X001	1-781-188-21	OSCILLATOR, CRYSTAL (27MHz)			
X201	1-781-185-21	VIBRATOR, CERAMIC (12.5MHz)			
X501	1-767-922-11	VIBRATOR, CERAMIC (16MHz)			
X503	1-781-465-21	VIBRATOR, CRYSTAL (12.288MHz)			
**********					
	A-4428-323-A	FP-932 BOARD, COMPLETE (EXCEPT CH)			
	A-4726-262-A	FP-932 BOARD, COMPLETE (CH)			
		**********			
	4-226-339-01	HOLDER (LED)			
	4-227-174-01	SHEET, DIFFUSION			
	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING			
		< CAPACITOR >			
C100	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C101	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C103	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN100	1-784-084-11	CONNECTOR, FFC/FPC 14P			
CN102	1-506-468-11	PIN, CONNECTOR 3P			
		< DIODE >			
D100	8-719-079-51	DIODE SELU2E10C-TP6			
D101	8-719-079-51	DIODE SELU2E10C-TP6			
D102	8-719-079-51	DIODE SELU2E10C-TP6			
D103	8-719-073-01	DIODE MA111			
		< IC >			
IC100	8-759-366-34	IC LC75824E			
IC101	8-759-459-86	IC NJL64H400A			
		< JUMPER RESISTOR >			
JW100	1-216-296-91	SHORT	0		

Ref. No.	Part No.	Description			Remark
JW101	1-216-296-91	SHORT	0		
JW102	1-216-296-91	SHORT	0		
JW103	1-216-296-91	SHORT	0		
JW104	1-216-296-91	SHORT	0		
JW105	1-216-296-91	SHORT	0		
JW106	1-216-296-91	SHORT	0		
JW107	1-216-296-91	SHORT	0		
JW108	1-216-296-91	SHORT	0		
JW109	1-216-296-91	SHORT	0		
JW110	1-216-296-91	SHORT	0		
JW111	1-216-296-91	SHORT	0		
JW112	1-216-296-91	SHORT	0		
JW113	1-216-296-91	SHORT	0		
JW114	1-216-296-91	SHORT	0		
JW115	1-216-296-91	SHORT	0		
JW116	1-216-296-91	SHORT	0		
JW117	1-216-296-91	SHORT	0		
JW118	1-216-296-91	SHORT	0		
JW119	1-216-296-91	SHORT	0		
JW120	1-216-296-91	SHORT	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD100	1-803-910-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q100	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q101	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q102	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
		< RESISTOR >			
R100	1-216-023-91	RES-CHIP	82	5%	1/10W
R101	1-216-023-91	RES-CHIP	82	5%	1/10W
R102	1-216-023-91	RES-CHIP	82	5%	1/10W
R103	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R108	1-216-089-91	RES-CHIP	47K	5%	1/10W
R109	1-216-107-00	METAL CHIP	270K	5%	1/10W
R112	1-216-073-00	METAL CHIP	10K	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R116	1-216-073-00	METAL CHIP	10K	5%	1/10W
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R120	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
**********					
	A-4428-322-A	HP-932 BOARD, COMPLETE (EXCEPT CH)			
	A-4726-261-A	HP-932 BOARD, COMPLETE (CH)			
		**********			
		< CAPACITOR >			
C300	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C301	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C302	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C303	1-124-234-00	ELECT	22uF	20%	16V
C304	1-124-234-00	ELECT	22uF	20%	16V
C305	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V

HP-932 LOADING POWER

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN300	1-779-000-11	CONNECTOR, FFC/FPC 5P			
		< DIODE >			
D300	8-719-914-42	DIODE DA204K-T-146			
		< JACK >			
J300	1-566-891-21	JACK (PHONES)			
		< COIL >			
L300	1-410-387-11	INDUCTOR CHIP	33uH		
L301	1-410-387-11	INDUCTOR CHIP	33uH		
		< TRANSISTOR >			
Q300	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q301	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
		< RESISTOR >			
R300	1-216-049-91	RES-CHIP	1K	5%	1/10W
R301	1-216-049-91	RES-CHIP	1K	5%	1/10W
R302	1-216-021-00	METAL CHIP	68	5%	1/10W
R303	1-216-021-00	METAL CHIP	68	5%	1/10W
**********					
	1-676-599-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
* CN1	1-568-943-11	PIN, CONNECTOR 5P			
		< SWITCH >			
S1	1-771-799-11	SWITCH, LEVER (SLIDE)			
**********					
	A-4428-327-A	POWER BOARD, COMPLETE (CND,US)			
	A-4473-122-A	POWER BOARD, COMPLETE (AEP,AUS,CEN,CEU,KR,RU,UK)			
	A-4473-132-A	POWER BOARD, COMPLETE (E32,EA3)			
	A-4473-889-A	POWER BOARD, COMPLETE (MX)			
	A-4475-197-A	POWER BOARD, COMPLETE (E12,HK,SP)			
	A-4476-366-A	POWER BOARD, COMPLETE (TW)			
	A-4726-265-A	POWER BOARD, COMPLETE (CH)			
		**********			
	7-685-547-14	SCREW +BTP 3X10 TYPE2 N-S			
		< CAPACITOR >			
C101	1-126-959-11	ELECT	0.47uF	20%	50V
C102	1-126-940-11	ELECT	330uF	20%	25V
C103	1-136-846-11	MYLAR	1.5uF	5%	50V
C104	1-136-846-11	MYLAR	1.5uF	5%	50V
C105	1-136-173-91	MYLAR	0.47uF	5%	50V
C111	1-163-019-00	CAP, CHIP CERAMIC	6800PF	10%	50V
C112	1-163-019-00	CAP, CHIP CERAMIC	6800PF	10%	50V
C113	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C114	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C131	1-126-959-11	ELECT	0.47uF	20%	50V
C132	1-126-940-11	ELECT	330uF	20%	25V
C133	1-136-846-11	MYLAR	1.5uF	5%	50V
C134	1-136-846-11	MYLAR	1.5uF	5%	50V
C135	1-136-173-91	MYLAR	0.47uF	5%	50V
C142	1-163-019-00	CAP, CHIP CERAMIC	6800PF	10%	50V
C143	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C144	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C161	1-126-959-11	ELECT	0.47uF	20%	50V
C162	1-126-940-11	ELECT	330uF	20%	25V
C163	1-136-846-11	MYLAR	1.5uF	5%	50V
C164	1-136-846-11	MYLAR	1.5uF	5%	50V
C165	1-136-173-91	MYLAR	0.47uF	5%	50V
C173	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C174	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C201	1-126-959-11	ELECT	0.47uF	20%	50V
C202	1-126-940-11	ELECT	330uF	20%	25V
C203	1-136-846-11	MYLAR	1.5uF	5%	50V
C204	1-136-846-11	MYLAR	1.5uF	5%	50V
C205	1-136-173-91	MYLAR	0.47uF	5%	50V
C211	1-163-019-00	CAP, CHIP CERAMIC	6800PF	10%	50V
C212	1-162-305-11	CAP, CHIP CERAMIC	6800PF	20%	16V
C213	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C214	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C231	1-126-964-11	ELECT	10uF	20%	50V
C232	1-126-940-11	ELECT	330uF	20%	25V
C233	1-136-846-11	MYLAR	1.5uF	5%	50V
C234	1-136-846-11	MYLAR	1.5uF	5%	50V
C235	1-136-173-91	MYLAR	0.47uF	5%	50V
C243	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C261	1-126-959-11	ELECT	0.47uF	20%	50V
C262	1-126-940-11	ELECT	330uF	20%	25V
C263	1-136-846-11	MYLAR	1.5uF	5%	50V
C264	1-136-846-11	MYLAR	1.5uF	5%	50V
C265	1-136-173-91	MYLAR	0.47uF	5%	50V
C271	1-162-305-11	CAP, CHIP CERAMIC	6800PF	20%	16V
C272	1-163-019-00	CAP, CHIP CERAMIC	6800PF	10%	50V
C273	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C274	1-163-251-11	CAP, CHIP CERAMIC	100PF	5%	50V
C301	1-126-934-11	ELECT	220uF	20%	10V
C302	1-126-942-61	ELECT	1000uF	20%	25V
C303	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C304	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C305	1-126-960-11	ELECT	1uF	20%	50V
C306	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C307	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C308	1-126-960-11	ELECT	1uF	20%	50V
C309	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C310	1-136-165-00	MYLAR	0.1uF	5%	50V
C311	1-126-940-11	ELECT	330uF	20%	25V
C312	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C313	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C331	1-126-934-11	ELECT	220uF	20%	10V
C332	1-126-942-61	ELECT	1000uF	20%	25V
C333	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C334	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C335	1-126-960-11	ELECT	1uF	20%	50V
C336	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

Ref. No.	Part No.	Description			Remark
C337	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C338	1-126-960-11	ELECT	1uF	20%	50V
			(US,CND,AEP,UK,SP,HK,AUS)		
C339	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C340	1-136-165-00	MYLAR	0.1uF	5%	50V
C341	1-126-940-11	ELECT	330uF	20%	25V
C342	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C343	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C361	1-126-934-11	ELECT	220uF	20%	10V
C362	1-126-942-61	ELECT	1000uF	20%	25V
C363	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C364	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C365	1-126-960-11	ELECT	1uF	20%	50V
C366	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C367	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C368	1-126-960-11	ELECT	1uF	20%	50V
C369	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C370	1-136-165-00	MYLAR	0.1uF	5%	50V
C371	1-126-940-11	ELECT	330uF	20%	25V
C372	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C373	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C402	1-126-944-11	ELECT	3300uF	20%	25V
C403	1-119-774-91	ELECT	100uF	20%	16V
			(AEP,UK,SP,HK,E32,AUS)		
C404	1-119-774-91	ELECT	100uF	20%	16V
			(AEP,UK,SP,HK,E32,AUS)		
C405	1-119-774-91	ELECT	100uF	20%	16V
			(AEP,UK,SP,HK,E32,AUS)		
⚠C901	1-115-165-11	CAP, FILM	0.1uF	20%	275V
⚠C902	1-115-165-11	CAP, FILM	0.1uF	20%	275V
C903	1-107-423-91	CAP, METALIZED PE FILM	220PF		1000V
			(AEP,UK,SP,HK,E32,AUS)		
C903	1-135-839-31	CAP, METALIZED PE FILM	4700PF		(US,CND)
C904	1-162-290-31	CERAMIC	470PF	10%	50V
⚠C905	1-113-920-11	CERAMIC	0.0022uF	20%	250V
⚠C906	1-113-920-11	CERAMIC	0.0022uF	20%	250V
⚠C907	1-135-591-11	CAP, ELECT	680uF	20%	200V
					(US,CND)
⚠C907	1-135-921-11	CAP, ELECT	220uF	20%	400V
			(AEP,UK,SP,HK,E32,AUS)		
C908	1-128-576-11	ELECT	100uF	20%	63V
C909	1-162-302-21	CAP, CERAMIC	2200PF	20%	16V
					(US,CND)
C909	1-162-294-31	CERAMIC	0.001uF	10%	50V
			(AEP,UK,SP,HK,E32,AUS)		
⚠C910	1-117-701-51	CERAMIC	0.0022uF	99%	250V
C911	1-124-755-51	ELECT	3300uF	20%	16V
C912	1-115-789-11	ELECT	1000uF	20%	25V
C913	1-111-070-51	ELECT	2200uF	20%	25V
C914	1-111-070-51	ELECT	2200uF	20%	25V
C915	1-111-070-51	ELECT	2200uF	20%	25V
C916	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C917	1-126-942-61	ELECT	1000uF	20%	25V
C918	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C919	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C920	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C921	1-126-933-11	ELECT	100uF	20%	16V
C922	1-126-964-11	ELECT	10uF	20%	50V
C924	1-126-933-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remark
C925	1-104-665-11	ELECT	100uF	20%	10V
C926	1-164-159-21	CERAMIC	0.1uF		50V
C927	1-126-942-61	ELECT	1000uF	20%	25V
C928	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C929	1-104-665-11	ELECT	100uF	20%	10V
C930	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C931	1-104-665-11	ELECT	100uF	20%	10V
C932	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C933	1-126-916-11	ELECT	1000uF	20%	6.3V
C934	1-163-017-91	CERAMIC CHIP	4700PF	5%	25V
C935	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
					(AEP,UK,SP,HK,E32,AUS)
C936	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
⚠C937	1-113-920-11	CERAMIC	0.0022uF	20%	250V
C938	1-164-159-21	CERAMIC	0.1uF		50V
					(AEP,UK,SP,HK,E32,AUS)
C939	1-135-931-11	CAP, CERAMIC	0.047uF		630V
					(AEP,UK,SP,HK,E32,AUS)
C941	1-107-426-91	CAP, CERAMIC	680PF	10%	1000V
					(US,CND)
C941	1-135-932-11	CAP, CERAMIC	0.015uF		630V
					(AEP,UK,SP,HK,E32,AUS)
C942	1-107-426-91	CAP, CERAMIC	680PF	10%	1000V
					(US,CND)
C945	1-117-703-51	CERAMIC	0.0047uF	99%	250V
		< CONNECTOR >			
CN401	1-785-951-11	CONNECTOR, FFC/FPC (ZIF) 18P			
CN402	1-573-846-11	CONNECTOR, BOARD TO BOARD 14P			
					(US,CND,AEP,UK,SP,HK,AUS)
CN901	1-564-321-00	PIN, CONNECTOR 2P			
		< DIODE >			
D101	8-719-210-21	DIODE 11EQS04-TA1B			
D102	8-719-210-21	DIODE 11EQS04-TA1B			
D131	8-719-210-21	DIODE 11EQS04-TA1B			
D132	8-719-210-21	DIODE 11EQS04-TA1B			
D161	8-719-210-21	DIODE 11EQS04-TA1B			
D162	8-719-210-21	DIODE 11EQS04-TA1B			
D201	8-719-210-21	DIODE 11EQS04-TA1B			
D202	8-719-210-21	DIODE 11EQS04-TA1B			
D231	8-719-210-21	DIODE 11EQS04-TA1B			
D232	8-719-210-21	DIODE 11EQS04-TA1B			
D261	8-719-210-21	DIODE 11EQS04-TA1B			
D262	8-719-210-21	DIODE 11EQS04-TA1B			
D301	8-719-073-01	DIODE MA111-(K8).S0			
D302	8-719-404-50	DIODE MA111-TX			
D304	8-719-404-50	DIODE MA111-TX			
D331	8-719-404-50	DIODE MA111-TX			
D332	8-719-404-50	DIODE MA111-TX			
D334	8-719-404-50	DIODE MA111-TX			
D361	8-719-404-50	DIODE MA111-TX			
D362	8-719-404-50	DIODE MA111-TX			
D364	8-719-404-50	DIODE MA111-TX			
D409	8-719-404-50	DIODE MA111-TX			
D901	8-719-022-92	DIODE RBV-604 (US,CND)			
D901	8-719-312-05	DIODE RBV-606 (AEP,UK,SP,HK,E32,AUS)			

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POWER

Ref. No.	Part No.	Description	Remark
D902	8-719-991-33	DIODE 1SS133T-77	
D903	8-719-200-92	DIODE 11EQS10-TA1	
D904	8-719-200-92	DIODE 11EQS10-TA1	
D905	8-719-200-92	DIODE 11EQS10-TA1	
D906	8-719-079-46	DIODE FMB-G14L	
D907	8-719-079-67	DIODE FME-24H (US,CND)	
D907	8-719-080-05	DIODE FMB-26L (AEP,UK,SP,HK,E32,AUS)	
D908	8-719-080-53	DIODE RK36LF-B3(US,CND)	
D908	8-719-080-06	DIODE RK39LF-A4 (AEP,UK,SP,HK,E32,AUS)	
D909	8-719-404-50	DIODE MA111-TX	
D910	8-719-210-21	DIODE 11EQS04-TA1B	
D911	8-719-200-82	DIODE 11ES2	
D912	8-719-069-54	DIODE UDZS-TE17-5.1B (US)	
D913	8-719-053-18	DIODE 1SR154-400TE-25	
D914	8-719-200-82	DIODE 11ES2-NTA1B	
D915	8-719-200-82	DIODE 11ES2	
D916	8-719-404-50	DIODE MA111-TX	
D917	8-719-404-50	DIODE MA111-TX	
D918	8-719-056-74	DIODE UDZS-TE-17-3.0B	
D919	8-719-404-50	DIODE MA111-TX	
D920	8-719-404-50	DIODE MA111-TX	
D921	8-719-982-33	DIODE MTZJ-T-77-36D	
D922	8-719-110-49	DIODE MTZJ-T-77-18B	
D923	8-719-080-26	DIODE SARS01 (AEP,UK,SP,HK,E32,AUS)	
D924	8-719-200-82	DIODE 11ES2	
		< GROUND TERMINAL >	
EB901	1-537-770-21	TERMINAL BOARD, GROUND	
EB902	1-537-770-21	TERMINAL BOARD, GROUND	
		< FERRITE BEAD >	
FB901	1-412-473-21	INDUCTOR 0UH	
		< FUSE HOLDER >	
FH901	1-533-313-	HOLDER, FUSE	
FH902	1-533-313-	HOLDER, FUSE	
		< IC >	
IC301	8-759-638-11	IC TA2020-020	
IC331	8-759-638-11	IC TA2020-020	
IC332	8-759-909-71	IC BA4558F-E2	
IC361	8-759-638-11	IC TA2020-020	
IC362	8-759-909-71	IC BA4558F-E2	
IC901	8-749-014-48	IC STR-F6656 (US,CND)	
IC901	8-749-017-79	IC STR-F6676 (AEP, UK,SP,HK,E32,AUS)	
IC902	8-759-644-34	IC SE013E	
IC903	8-759-604-50	IC M5F7910L	
IC904	8-759-604-32	IC M5F7810L	
IC905	8-759-450-47	IC BA05T	
IC906	8-759-471-81	IC PQ05RD11	
IC907	8-759-471-81	IC PQ05RD11	
IC908	8-759-659-28	IC SI-8033S	
		< JACK >	
J401	1-694-656-11	TERMINAL BOARD	

Ref. No.	Part No.	Description			Remark
		< COIL >			
L101	1-419-281-11	INDUCTOR	10uH		
L102	1-419-281-11	INDUCTOR	10uH		
L131	1-419-281-11	INDUCTOR	10uH		
L132	1-419-281-11	INDUCTOR	10uH		
L161	1-419-281-11	INDUCTOR	10uH		
L162	1-419-281-11	INDUCTOR	10uH		
L201	1-419-281-11	INDUCTOR	10uH		
L202	1-419-281-11	INDUCTOR	10uH		
L231	1-419-281-11	INDUCTOR	10uH		
L232	1-419-281-11	INDUCTOR	10uH		
L261	1-419-281-11	INDUCTOR	10uH		
L262	1-419-281-11	INDUCTOR	10uH		
⚠L901	1-419-612-11	COIL, LINE FILTER			
L902	1-419-505-11	COIL, CHOKE			
L903	1-419-506-11	COIL, CHOKE			
L904	1-414-398-11	INDUCTOR	10uH		
L905	1-414-398-11	INDUCTOR	10uH		
L906	1-414-398-11	INDUCTOR	10uH		
L907	1-414-398-11	INDUCTOR	10uH		
L908	1-414-398-11	INDUCTOR	10uH		
L909	1-414-398-11	INDUCTOR	10uH		
L910	1-414-398-11	INDUCTOR	10uH		
L911	1-414-398-11	INDUCTOR	10uH		
L912	1-414-398-11	INDUCTOR	10uH		
L913	1-414-398-11	INDUCTOR	10uH		
L914	1-414-398-11	INDUCTOR	10uH		
		< PHOTO COUPLER >			
PC901	8-719-801-22	PHOTO COUPLER TLP621			
		< TRANSISTOR >			
Q405	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q902	8-729-209-15	TRANSISTOR	2SD2012		
Q903	8-729-111-29	TRANSISTOR	2SD1616A-TP-LK		
Q904	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q905	8-729-141-83	TRANSISTOR	2SB1375		
Q906	8-729-027-49	TRANSISTOR	DTC123EKA-T146		
Q907	8-729-141-83	TRANSISTOR	2SB1375		
Q909	8-729-027-49	TRANSISTOR	DTC123EKA-T146		
Q910	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q911	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q912	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q913	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q914	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q915	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-081-00	METAL CHIP	22K	5%	1/10W
R103	1-260-076-11	CARBON	10	5%	1/2W
R111	1-216-097-11	RES. CHIP	100K	5%	1/10W
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W
R132	1-216-081-00	METAL CHIP	22K	5%	1/10W
R133	1-260-076-11	CARBON	10	5%	1/2W

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POWER **PROTECT**

Ref. No.	Part No.	Description			Remark
R141	1-216-097-11	RES. CHIP	100K	5%	1/10W
R161	1-216-073-00	METAL CHIP	10K	5%	1/10W
R162	1-216-081-00	METAL CHIP	22K	5%	1/10W
R163	1-260-076-11	CARBON	10	5%	1/2W
R171	1-216-097-11	RES. CHIP	100K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-081-00	METAL CHIP	22K	5%	1/10W
R203	1-260-076-11	CARBON	10	5%	1/2W
R211	1-216-097-11	RES. CHIP	100K	5%	1/10W
R231	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R232	1-216-081-00	METAL CHIP	22K	5%	1/10W
R233	1-260-076-11	CARBON	10	5%	1/2W
R261	1-216-073-00	METAL CHIP	10K	5%	1/10W
R262	1-216-081-00	METAL CHIP	22K	5%	1/10W
R263	1-260-076-11	CARBON	10	5%	1/2W
R271	1-216-097-11	RES. CHIP	100K	5%	1/10W
R301	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R331	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R361	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R411	1-216-073-00	METAL CHIP	10K	5%	1/10W
R412	1-216-081-00	METAL CHIP	22K	5%	1/10W
R414	1-216-073-00	METAL CHIP	10K	5%	1/10W
R900	1-202-725-51	RES-CHIP	3.3M	5%	1/10W (AEP,UK,SP,HK,E32,AUS)
R901	1-247-843-91	RES. CARBON	3.3K	5%	1/4W (AEP,UK,SP,HK,E32,AUS)
R901	1-249-426-11	RES. CARBON	5.6K	5%	1/4W (US,CND)
R902	1-217-151-51	RES. CARBON	0.22	5%	2W (AEP,UK,SP,HK,E32,AUS)
R902	1-249-472-11	RES. CARBON	0.68	5%	1/2W (US,CND)
R903	1-249-415-11	CARBON	680	5%	1/4W F
R904	1-217-153-51	RES, METAL PLATE	0.47	5%	2W (AEP,UK,SP,HK,E32,AUS)
R904	1-217-611-00	RES, METAL PLATE	0.1	5%	1/2W (US,CND)
R905	1-215-877-81	RES. METAL OXIDE FILM	22K	5%	1W (US,CND)
R905	1-215-903-91	RES. METAL OXIDE FILM	68K	5%	2W (AEP,UK,SP,HK,E32,AUS)
R906	1-216-296-11	CONDUCTOR CHIP		0	(US,CND)
R907	1-249-421-11	CARBON	2.2K	5%	1/4W F
R907	1-247-843-11	CARBON	3.3K	5%	1/4W
R908	1-216-049-91	RES-CHIP	1K	5%	1/10W
R909	1-249-415-11	CARBON	680	5%	1/4W F
R910	1-247-807-31	CARBON	100	5%	1/4W
R911	1-247-783-91	RES. CARBON	10	5%	1/4W (AEP,UK,SP,HK,E32,AUS)
R912	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R914	1-249-417-11	CARBON	1K	5%	1/4W F
R917	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R918	1-249-417-11	CARBON	1K	5%	1/4W F
R919	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R921	1-249-417-11	CARBON	1K	5%	1/4W F
R923	1-216-025-91	RES-CHIP	100	5%	1/10W
R925	1-216-025-91	RES-CHIP	100	5%	1/10W
R926	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remark
R927	1-216-073-00	METAL CHIP	10K	5%	1/10W
⚠R928	1-202-725-00	SOLID	3.3M	10%	1/2W (US,CND)
R929	1-216-079-00	METAL CHIP	18K	5%	1/10W
R931	1-216-079-91	RES. CHIP	18K	5%	1/10W (AEP,UK,SP,HK,E32,AUS)
R931	1-216-089-11	RES. CHIP	47K	5%	1/10W (US,CND)
R932	1-216-101-91	RES. CHIP	150K	5%	1/10W (AEP,UK,SP,HK,E32,AUS)
R932	1-216-113-00	RES. CHIP	470K	5%	1/10W (US,CND)
R933	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R934	1-216-059-91	RES. CHIP	2.7K	5%	1/10W (AEP,UK,SP,HK,E32,AUS)
R934	1-216-067-00	RES. CHIP	5.6K	5%	1/10W (US,CND)
R935	1-247-843-11	CARBON	3.3K	5%	1/4W
R936	1-247-899-91	RES. CARBON	680K	5%	1/4W (AEP,UK,SP,HK,E32,AUS)
R937	1-247-903-00	CARBON	1M	5%	1/4W
R938	1-215-884-91	RES. METAL OXIDE FILM	47	5%	2W (AEP,UK,SP,HK,E32,AUS)
		< RELAY >			
RY301	1-515-921-11	RELAY (12V)			
RY331	1-515-921-11	RELAY (12V)			
RY361	1-515-921-11	RELAY (12V)			
		< TRANSFORMER >			
⚠T901	1-435-348-11	TRANSFORMER, POWER (US,CND)			
		< THERMISTOR >			
TH901	1-803-916-11	THERMISTOR, NTC			
**********					
	A-4428-329-A	PROTECT BOARD, COMPLETE (EXCEPT CH)			
	A-4726-264-A	PROTECT BOARD, COMPLETE (CH)			
		**********			
		< CAPACITOR >			
C109	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C110	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C139	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C140	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C169	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C170	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C209	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C210	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C239	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C240	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C269	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C270	1-127-573-91	CERAMIC CHIP	1uF	10%	16V
C403	1-125-972-91	ELECT	100uF	20%	16V
C404	1-125-972-91	ELECT	100uF	20%	16V
C405	1-125-972-91	ELECT	100uF	20%	16V

以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。	The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PROTECT PW-932 SW-932

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN403	1-573-828-11	CONNECTOR, BOARD TO BOARD 14P			
		< DIODE >			
D103	8-719-404-50	DIODE MA111-TX			
D104	8-719-404-50	DIODE MA111-TX			
D133	8-719-404-50	DIODE MA111-TX			
D134	8-719-404-50	DIODE MA111-TX			
D163	8-719-404-50	DIODE MA111-TX			
D164	8-719-404-50	DIODE MA111-TX			
D203	8-719-404-50	DIODE MA111-TX			
D204	8-719-404-50	DIODE MA111-TX			
D233	8-719-404-50	DIODE MA111-TX			
D234	8-719-404-50	DIODE MA111-TX			
D263	8-719-404-50	DIODE MA111-TX			
D264	8-719-404-50	DIODE MA111-TX			
D402	8-719-200-82	DIODE 11ES2-NTA1B			
D404	8-719-109-93	DIODE MTZJ-T-77-6.2B			
D405	8-719-404-50	DIODE MA111-TX			
D406	8-719-404-50	DIODE MA111-TX			
D407	8-719-404-50	DIODE MA111-TX			
D408	8-719-404-50	DIODE MA111-TX			
		< IC >			
IC401	8-759-932-92	IC MC14069UBF-T2			
IC402	8-759-009-82	IC MC14011BF-T2			
IC403	8-759-932-92	IC MC14069UBF-T2			
		< TRANSISTOR >			
Q401	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q402	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q403	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q404	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q406	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R108	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R109	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R110	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R138	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R139	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R140	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R168	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R169	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R170	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R208	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R209	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R210	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R238	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R239	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R240	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R268	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R269	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R270	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R401	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R402	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R403	1-216-113-00	METAL CHIP	470K	5% 1/10W	
R404	1-216-089-91	RES-CHIP	47K	5% 1/10W	
R405	1-216-121-91	RES-CHIP	1M	5% 1/10W	
R406	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R407	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R408	1-216-089-91	RES-CHIP	47K	5% 1/10W	
R409	1-216-081-00	METAL CHIP	22K	5% 1/10W	
R410	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R413	1-216-089-91	RES-CHIP	47K	5% 1/10W	

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	A-4428-321-A	PW-932 BOARD, COMPLETE (EXCEPT CH)			
	A-4726-260-A	PW-932 BOARD, COMPLETE (CH)			
		**********			
		< CONNECTOR >			
* CN400	1-568-942-11	PIN, CONNECTOR 4P			
		< DIODE >			
D400	8-719-079-48	DIODE SMLS72423C-TP15 (POWER STANDBY)			
		< TRANSISTOR >			
Q400	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q401	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q402	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R400	1-216-025-91	RES-CHIP	100	5% 1/10W	
R401	1-216-049-91	METAL CHIP	1K	5% 1/10W	
		< SWITCH >			
S400	1-571-760-11	SWITCH, KEY BOARD (I/⏻)			

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	A-4428-320-A	SW-932 BOARD, COMPLETE (EXCEPT CH)			
	A-4726-259-A	SW-932 BOARD, COMPLETE (CH)			
		**********			
	4-226-334-01	KNOB (CURSOR)			
	4-931-757-31	SCREW (DIA.2.6X8) (IT3B), TAPPING			
		< JUMPER RESISTOR >			
JW200	1-216-296-91	SHORT	0		
JW201	1-216-296-91	SHORT	0		
JW202	1-216-296-91	SHORT	0		
		< RESISTOR >			
R200	1-216-089-91	RES-CHIP	47K	5% 1/10W	
R201	1-216-059-00	METAL CHIP	2.7K	5% 1/10W	
R202	1-216-077-91	RES-CHIP	15K	5% 1/10W	
R203	1-216-059-00	METAL CHIP	2.7K	5% 1/10W	
R204	1-216-077-91	RES-CHIP	15K	5% 1/10W	
R205	1-216-055-00	METAL CHIP	1.8K	5% 1/10W	
R206	1-216-071-00	METAL CHIP	8.2K	5% 1/10W	
R207	1-216-055-00	METAL CHIP	1.8K	5% 1/10W	
R208	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R209	1-216-065-91	RES-CHIP	4.7K	5% 1/10W	
R210	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	

Ref. No.	Part No.	Description			Remark
R211	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R212	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R213	1-216-049-91	RES-CHIP	1K	5%	1/10W
R214	1-216-049-91	RES-CHIP	1K	5%	1/10W
R215	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R216	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R217	1-216-089-91	RES-CHIP	47K	5%	1/10W
		< SWITCH >			
S201	1-571-760-11	SWITCH, KEY BOARD (■)			
S202	1-571-760-11	SWITCH, KEY BOARD (▶▶I)			
S203	1-571-760-11	SWITCH, KEY BOARD (BAND)			
S205	1-571-760-11	SWITCH, KEY BOARD (▮▮)			
S206	1-571-760-11	SWITCH, KEY BOARD (I◀◀)			
S207	1-571-760-11	SWITCH, KEY BOARD (SOUND FIELD)			
S209	1-571-760-11	SWITCH, KEY BOARD (▷)			
S210	1-571-760-11	SWITCH, KEY BOARD (FUNCTION)			
S211	1-571-760-11	SWITCH, KEY BOARD (MUTE)			
S213	1-571-760-11	SWITCH, KEY BOARD (DVD MUTE)			
S214	1-571-760-11	SWITCH, KEY BOARD (⏏)			
S215	1-571-760-11	SWITCH, KEY BOARD (TITLE)			
S216	1-771-879-11	SWITCH, TACTILE (← ↑ → ↓ PUSH ENTER)			
S217	1-571-760-11	SWITCH, KEY BOARD (RETURN)			
S218	1-571-760-11	SWITCH, KEY BOARD (DISPLAY)			

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	A-4724-996-A	TK BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C004	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C006	1-124-779-00	ELECT CHIP	10uF	20%	16V
C007	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C009	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C010	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C011	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C012	1-124-779-00	ELECT CHIP	10uF	20%	16V
C013	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C014	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C015	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C016	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C017	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C018	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C019	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C020	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C021	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C022	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C023	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C024	1-164-730-11	CERAMIC CHIP	0.0012uF	10%	50V
C025	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C026	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C027	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C028	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C029	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C030	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C031	1-124-779-00	ELECT CHIP	10uF	20%	16V
C032	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C033	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C034	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C035	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C036	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C037	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C038	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C039	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C040	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C041	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C043	1-164-789-11	CERAMIC CHIP	0.22uF	10%	50V
		< CONNECTOR >			
CN001	1-573-363-21	CONNECTOR, FFC/FPC 23P			
CN002	1-566-529-11	CONNECTOR, FPC (ZIF) 13P			
CN003	1-784-870-21	CONNECTOR, FFC (LIF(NON-ZIF)) 18P			
CN004	1-784-870-21	CONNECTOR, FFC (LIF(NON-ZIF)) 18P			
		< DIODE >			
D003	8-719-073-01	DIODE MA111-(K8).S0			
		< IC >			
IC001	8-759-567-24	IC SSI33P3722			
		< COIL >			
L001	1-412-031-11	INDUCTOR CHIP	47uH		
		< TRANSISTOR >			
Q001	8-729-903-46	TRANSISTOR	2SB1132-T100-QR		
Q002	8-729-015-76	TRANSISTOR	UN5211-TX		
		< RESISTOR >			
R001	1-216-815-11	METAL CHIP	330	5%	1/16W
R002	1-216-809-11	METAL CHIP	100	5%	1/16W
R003	1-216-809-11	METAL CHIP	100	5%	1/16W
R004	1-216-837-11	METAL CHIP	22K	5%	1/16W
R005	1-216-013-00	METAL CHIP	33	5%	1/10W
R006	1-216-013-00	METAL CHIP	33	5%	1/10W
R007	1-216-841-11	METAL CHIP	47K	5%	1/16W
R008	1-216-797-11	METAL CHIP	10	5%	1/16W
R009	1-216-834-11	METAL CHIP	12K	5%	1/16W
R010	1-216-833-91	RES-CHIP	10K	5%	1/16W
R012	1-216-864-11	METAL CHIP	0	5%	1/16W
R014	1-216-864-11	METAL CHIP	0	5%	1/16W
R015	1-216-833-91	RES-CHIP	10K	5%	1/16W
R016	1-216-833-91	RES-CHIP	10K	5%	1/16W
R017	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R018	1-216-833-91	RES-CHIP	10K	5%	1/16W
R022	1-216-811-11	METAL CHIP	150	5%	1/16W
R023	1-216-820-11	METAL CHIP	820	5%	1/16W
R025	1-216-813-11	METAL CHIP	220	5%	1/16W
R026	1-216-864-11	METAL CHIP	0	5%	1/16W
R029	1-216-861-11	METAL CHIP	2.2M	5%	1/16W

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TUNER VIDEO VL-932

Ref. No.	Part No.	Description			Remark
	A-4424-428-A	TUNER BOARD, COMPLETE (CND,US)			
	A-4424-647-A	TUNER BOARD, COMPLETE (AEP,CEN,CEU,CH,KR,TW,UK)			
	A-4424-650-A	TUNER BOARD, COMPLETE (AUS,E12,E32,EA3,HK,MX,RU,SP)			
		**********			
	A-4428-332-A	VIDEO BOARD, COMPLETE (EXCEPT CH)			
	A-4726-267-A	VIDEO BOARD, COMPLETE (CH)			
		**********			
		< CAPACITOR >			
C700	1-126-964-11	ELECT	10uF	20% 50V	
C701	1-126-933-11	ELECT	100uF	20% 16V	
C702	1-126-964-11	ELECT	10uF	20% 50V	
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C705	1-126-964-11	ELECT	10uF	20% 50V	
C706	1-126-964-11	ELECT	10uF	20% 50V	
C707	1-126-964-11	ELECT	10uF	20% 50V	
C708	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C709	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C710	1-126-933-11	ELECT	100uF	20% 16V	
C711	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C712	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C713	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C714	1-126-964-11	ELECT	10uF	20% 50V	
C715	1-126-964-11	ELECT	10uF	20% 50V	
C716	1-126-933-11	ELECT	100uF	20% 16V	
C717	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C718	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C719	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C720	1-216-295-91	SHORT	0		
C721	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C722	1-126-964-11	ELECT	10uF	20% 50V	
C723	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
		< CONNECTOR >			
CN700	1-784-455-11	CONNECTOR, FFC/FPC 13P			
		< IC >			
IC700	8-759-696-10	IC NJM2235V (TE2)			
IC701	8-759-663-94	IC LA7106M-TLM			
IC702	8-759-284-49	IC NJM2285V			
		< JACK >			
J700	1-794-035-11	JACK, PIN (WITH 4P S TERMINAL)			
		< COIL >			
L700	1-469-525-91	INDUCTOR	10uH		
L701	1-469-525-91	INDUCTOR	10uH		
L702	1-469-525-91	INDUCTOR	10uH		
		< TRANSISTOR >			
Q700	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q701	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q702	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q703	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		
Q704	8-729-024-91	TRANSISTOR	2SC2712-GL-TE85L		

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R700	1-216-037-00	METAL CHIP	330	5%	1/10W
R701	1-216-037-00	METAL CHIP	330	5%	1/10W
R702	1-216-037-00	METAL CHIP	330	5%	1/10W
R703	1-216-022-00	METAL CHIP	75	5%	1/10W
R704	1-216-022-00	METAL CHIP	75	5%	1/10W
R705	1-216-022-00	METAL CHIP	75	5%	1/10W
R706	1-216-022-00	METAL CHIP	75	5%	1/10W
R707	1-216-073-00	METAL CHIP	10K	5%	1/10W
R708	1-216-073-00	METAL CHIP	10K	5%	1/10W
R709	1-216-073-00	METAL CHIP	10K	5%	1/10W
R710	1-216-022-00	METAL CHIP	75	5%	1/10W
R711	1-216-073-00	METAL CHIP	10K	5%	1/10W
R712	1-216-073-00	METAL CHIP	10K	5%	1/10W
R713	1-216-045-00	METAL CHIP	680	5%	1/10W
R714	1-216-022-00	METAL CHIP	75	5%	1/10W
R716	1-216-073-00	METAL CHIP	10K	5%	1/10W
R718	1-216-073-00	METAL CHIP	10K	5%	1/10W
R719	1-216-073-00	METAL CHIP	10K	5%	1/10W
R720	1-216-081-00	METAL CHIP	22K	5%	1/10W
R721	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R722	1-216-049-91	RES-CHIP	1K	5%	1/10W
R723	1-216-045-00	METAL CHIP	680	5%	1/10W
R724	1-216-049-91	RES-CHIP	1K	5%	1/10W
R725	1-216-073-00	METAL CHIP	10K	5%	1/10W
R726	1-216-081-00	METAL CHIP	22K	5%	1/10W

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	A-4428-324-A	VL-932 BOARD, COMPLETE (EXCEPT CH)		
	A-4726-263-A	VL-932 BOARD, COMPLETE (CH)		
		**********		
		< CAPACITOR >		
C500	1-163-021-91	CERAMIC CHIP	0.01uF	10.00% 50V
C501	1-163-021-91	CERAMIC CHIP	0.01uF	10.00% 50V
		< SWITCH >		
S500	1-473-392-11	ENCODER, ROTARY (VOLUME)		

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
13	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK,HK)	
14	1-792-403-11	CABLE, FLAT (14 core)	
15	1-792-404-11	CABLE, FLAT (5 core)	
17	1-792-406-11	CABLE, FLAT (13 core)	
18	1-792-399-11	CABLE, FLAT (18 core)	
19	1-792-400-11	CABLE, FLAT (18core)	
20	1-792-401-11	CABLE, FLAT (7 core)	
21	1-792-402-11	CABLE, FLAT (27 core)	
112	A-4672-891-A	MOTOR (LD) ASSY	
⚠117	8-820-081-09	OPTICAL PICK-UP KHM220AAA/J1N1	
⚠CNP901	1-690-608-11	CORD, POWER (AUS)	
⚠CNP901	1-696-169-22	CORD, POWER (AEP,UK,CEN,CEU,RU,EA,E12,E32,SP,HK,TW)	
⚠CNP901	1-769-079-22	CORD, POWER (KR)	
⚠CNP901	1-775-789-91	CORD, POWER (MX)	
⚠CNP901	1-782-464-21	CORD, POWER (CH)	
⚠CNP901	1-783-531-61	CORD, POWER (US,CND)	
⚠F901	1-533-470-11	FUSE GLASS (T3.15AL/250V)(EXCEPT US,CND)	
⚠F901	1-576-375-11	FUSE GLASS (3.15A/125V)(US,CND)	
LCD100	1-803-910-11	DISPLAY PANEL, LIQUID CRYSTAL	

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		**********	
		HARDWARE LIST	
		**********	
#1	7-685-246-14	SCREW +KTP 3X8 TYPE2 N-S	
#2	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#3	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	

以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。	The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2000.04	New
	2000.12	Addition of Canadian model.
1.1	2001.06	Correction of test mode, exploded views and electrical parts list. Model addition : CH, CEN, MX, RU, CEU, E12, EA3, KR, and TW models. (SFD-01011)
1.2	2001.08	Correction of electrical parts list (IC205 t IC206). (SPM- 01032)
1.3	2002.06	Correction of parts supply classification (Ref. No. 104 and 122). (SPM- 02039)
1.4	2002.12	Addition of model identification. Correction of exploded views list (Ref.No. 7 and CNP901). Part No. correction of IC702. (PMC- 02114)
1.5	2003.01	Note addition in the optical pick-up exchange. (SPM- 03003)
1.6	2003.02	Change of the above note. (SPM-03005)
1.7	2004.05	Note addition in the DVD board exchange. (SPM-04038)